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SECOND ANNUAL REPORT

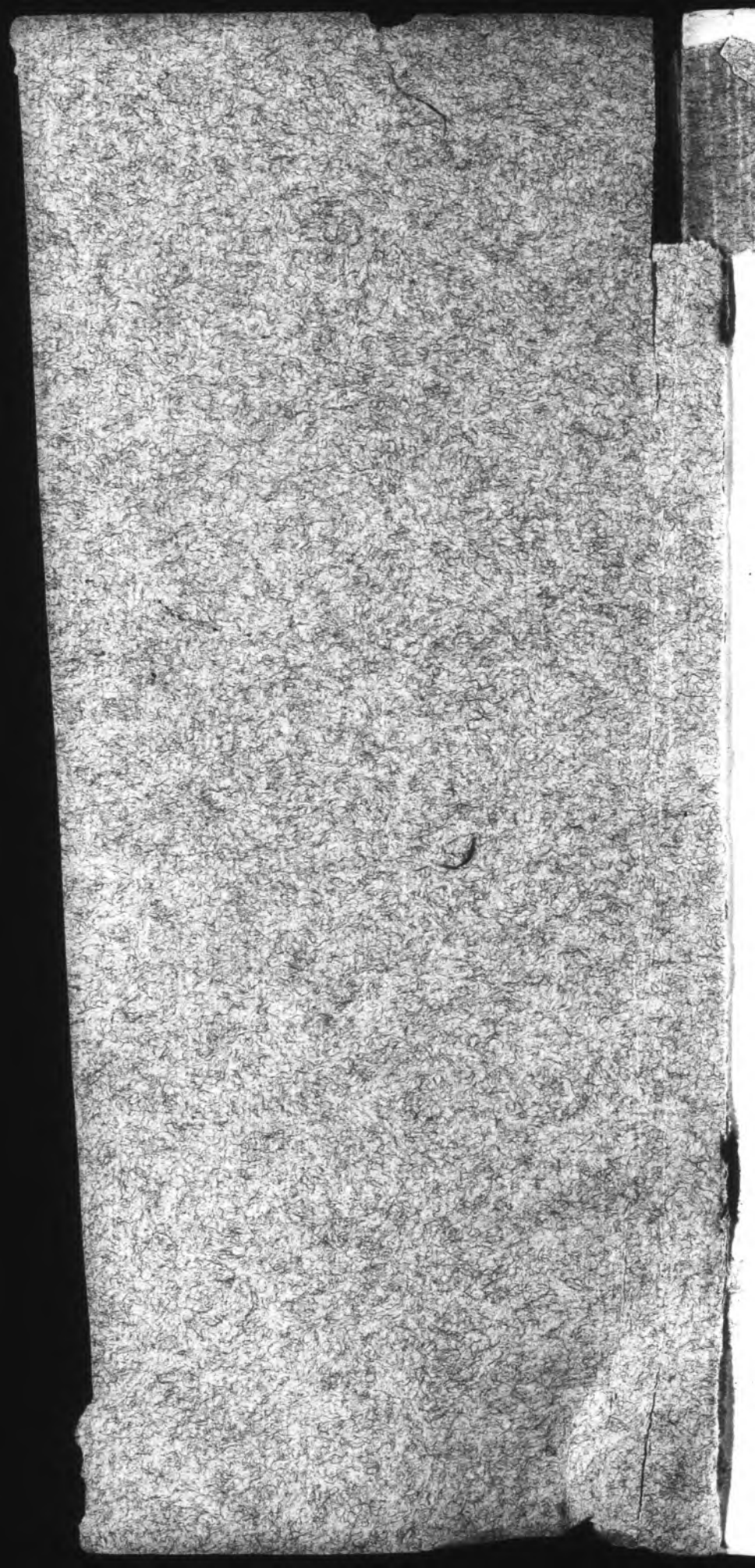
DEPARTMENT CREATED 191

E. Z. JONES, Commissione

TALLAHASSEE, FLORIDA.

1914 - 1915

T. J. APPLEYARD, STATE PRINTER, TALLAHASSE



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OUR FISH AND OUR FUTURE.

For many years the attempt to preserve the game animals and birds was resented by the people in general, who held that the supply of food represented by the inhabitants of the forest should be free to them as to their ancestors, and insisted that any restriction on their rights to hunt and kill was in the favoritism accorded a favored class. The disappearance of game followed, and the practical absence of a cheap and healthy supply of food from the tables of all who were unable to set up private preserves; every State in the Union now protects its game, and proofs are afforded that under the law the poor man profits more than his rich fellow citizen.

In Florida fish and shellfish were so plentiful that the average man regarded restrictions on their consumption and destruction as merely a fad. Especially did the fishermen who worked for the market resent the proposition to regulate their industry; as a result they are now finding their most skilful and persistent efforts go unrewarded. Since they elected the officers who must be charged with the duty of enforcing any law that might be enacted, the effort to protect fish resulted in making the law contemptible—since they had a voice potential in electing the Governor charges of neglect of duty made against officials who refused to enforce the law were disregarded. In too many instances the officials grew tyrannical on finding their neglect was approved by public sentiment, and sometimes showed as little regard for the rights of the fishermen as for those of others.

But times change and men change with them—sometimes we wish the views of officials also were subject to change. Now that the supply fails them the fishermen have associated themselves to secure protection, and a bill, drawn in accordance with their wishes, will be presented at the next session of the Legislature, embodying the views as well of those who have so long labored without effect to secure the same result. Opposed by the fishermen the

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advocates of protection could do nothing better than pass laws that were not enforced—with the support of the fishermen the laws that can now be enacted would prove effective, for the same reason that they have heretofore proved futile—when public opinion drives the official he will act.

Experience also teaches that a closed season will not serve its purpose unless penalties be attached for transporting the products—impose a fine on express or railroad lines in possession of fish and the fish will be caught only for local consumption, which can be abundantly supplied without injury. The people of the State are now fully aroused to the necessity of providing a closed season, and we believe there will be no difficulty in securing the needed legislation—the bill as prepared by the association should be enacted, and amendments may be added hereafter as may be found desirable. But the bill itself is a good one—amendments offered now should be considered as efforts to defeat the purpose of the bill by indirection, and we hope no real friend of the fish or fishermen will attempt to interfere with the wishes of those who have carefully considered all aspects of the matter and must be relied upon to give it force and effect. Let us have a real fishermen's bill, and then the fishermen will feel the obligation to respect it and watch after its enforcement.

But the public has interests also. As a check on the cost of food the harvests of our waters are valuable in themselves and valuable for their indirect action. As an attraction to the tourists the fish are valuable to the whole State; dredge our harbors and coasts clean of oysters and shell banks and the small fish will not be attracted—eliminate the small fishes and the big ones will not come to feed or to spawn. Deprive our waters of fish and shellfish and the tourists will go as well, while many will find life in Florida made unattractive in comparison—a climate alone is but half a drawing card.—Times-Union, March 1, 1915.

Tallahassee, Fla., March 1, 1915.

To His Excellency, Park Trammell,
Governor of Florida,
Tallahassee, Fla.

My Dear Sir:—I have the honor of submitting to you my report of the conditions of the Game and Fish Department of the State of Florida, giving the transactions of my office from March 1, 1914, to March 1, 1915, in conformity with Section 9 of Chapter 6535, Acts of the Legislature of 1913. On June 1, 1914, I submitted to you a report from this Department showing its conditions and transactions from September 1, 1913, to March 1, 1914. The information presented herewith is based upon conditions found by the working of the Department since March 1, 1914.

I desire to say for the benefit of the public, and in my own behalf, that the recommendations made in my first report were not made from a selfish standpoint, as some have seemed to think, because, as you know, at the time I submitted the report I also submitted to you my resignation as State Game and Fish Commissioner and afterwards (before you had acted upon it) I succeeded in getting you to allow me to withdraw my resignation. I made the recommendations in good faith and have nothing to retract, except that I find by actual experience that some changes recommended are not absolutely necessary. None of them, however, if made into law will be detrimental to the Department.

I am dealing in this report at length on some subjects which are of great importance to the Department, the purpose of doing so being to create all the interest possible in behalf of the Department, and to show the basis upon which a Game and Fish Department of any State is created. If I have the honor to remain State Game and Fish

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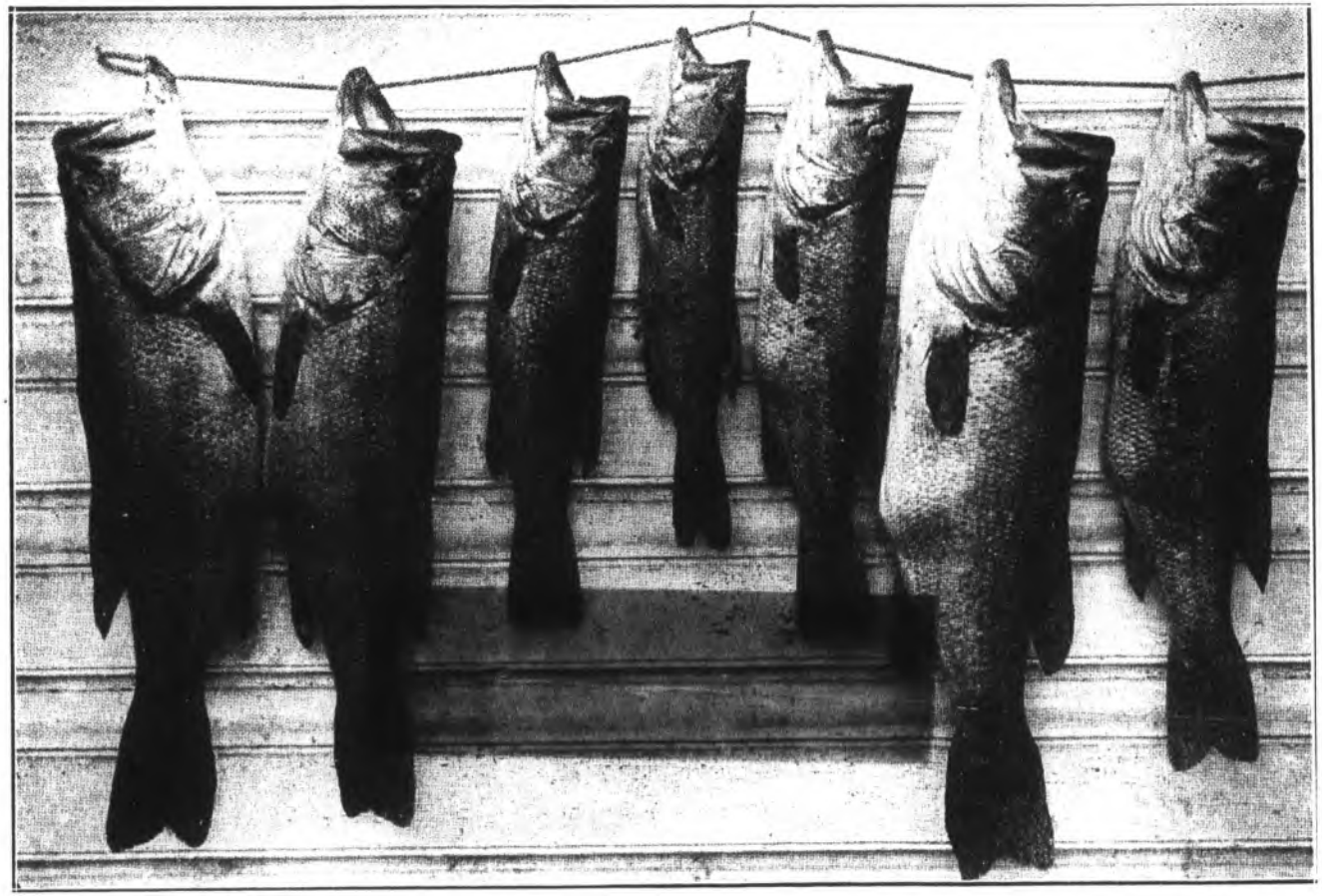
Commissioner, in the future each annual report will be reduced in reading matter until they finally reach a brief statement of facts and figures, together with the principal laws governing the Department. I have placed herewith information giving sufficient idea to our Legislators as to the value of Florida's wild life as a basis for their legislation to protect it as they see best.

GAME AND FISH LAWS BECOMING MORE FAVORED.

I am obliged to confirm my first report in stating that the Game and Fish Laws, as enacted by the Legislature of 1913, at first met with strong disfavor, especially when efforts were made to rigidly enforce them. There were much defiance of the officers of this Department in the enforcement of the Game and Fish Laws, but I have met the opposition fairly successful. Of course, there remains, and will always remain, opposition to the enforcement of the Game and Fish Laws of any State, but this can be said with regard to any criminal law, and I have no doubt that the Game and Fish Laws will continue to be more violated than any other criminal law. It is a great satisfaction to me to be able to say that the country people, especially the farmers, are falling in line of support of the laws governing this Department.

PUBLIC OPINION.

The average citizen cannot deny the usefulness of the game, birds and fish of this State, and he cannot deny that when any other person other than a member of his immediate family, or a person with a permit from him, attempt to interfiere with any game or fish upon his property, or in his immediate vicinity, that he will arise in arms against what he terms *such trespassing;* especially does this apply when a non-resident of the State attempts to hunt or fish in any section of the State, and the people are beginning to ask themselves the question that "if the



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wild life of the State is worth protecting from the slaughtering hands of non-residents and sportsmen, why is it not worth protecting from local "game-hogs" and "pot-hunters?" I have presented to the people of this State opinions of the highest court officials in the country, to the effect that the primary purpose of the Game and Fish Laws, contrary to the opinion of a few people, is protection, and court officials support the Acts of the Legislature of all States in making provisions for the protection of the wild life of their State and supports the contentions of those who claim game, birds and fish a valuable food supply, in addition to the value of protecting birds for the advancement of agriculture generally.

ENFORCEMENT OF THE LAWS.

By reason of the fact that the laws creating this Department placed upon the entire constabulary of the State the responsibility of assisting in their enforcement, I assumed the duties of office with no other idea but that I would have not only the assistance of a County Warden in each county, but the closest co-operation of the several sheriffs and their forces, as well as the other court officials of the State. Contrary to this, however, from the beginning, these officials generally have taken the position that the enforcement of the Game and Fish Laws rests with the State Game and Fish Commissioner and the Wardens. It is true the main responsibility of the enforcement of these laws rests with the Commissioner and the County Wardens, but I am sure that if the Legislators who created this Department had not felt that the constabulary of the State would assist in their enforcement and co-operate closely with the Department, they would have made provisions for additional force or placed requirements upon these officers so forcibly, as would have made it *necessary* for them to assist generally in the work. The result has been that in most counties I have received only

such help from the sheriffs and their forces as I have asked for from time to time, they never failing to respond when directly called upon. These officials are not inclined to undertake to enforce the Game and Fish Laws for the compensation allowed them because they state, in which they are correct, that the expenses attached to investigations of violations and catching violators of these laws are more than they can afford, even in such instances where the violators are apprehended, tried in the courts and convicted and pay their fines. They can afford to be more rigid in the enforcement of these laws and suffer more embarrassment in doing so if their compensation was more, but I am frank to say that they cannot be blamed by anyone who knows the conditions for taking the position which they do in this matter. All they get for their work under the present provisions, unless they act as a witness themselves, is mileage fees and such court costs as are allowed in other criminal cases. It is not sufficient for them to go to the expense that is necessary to investigate the violations of these laws, that are continuously reported to them, of which about one-tenth of one per cent are actually committed. Whether committed or not, however, these officials are required by the public to make an immediate investigation of reports, the result of which, if done, means a continuuos expense upon them, and it's more expensive to apprehend violators of Game and Fish Laws than any other law in the statutes. This same condition applies to County Judges. Many times it takes days to try one or more violators of these laws, which are so technical that nothing but undisputable evidence will convict. If judgment is not rendered the court gets nothing, and very little if it is.

SPECIAL SERVICE WORK.

The present Game Laws provide that in addition to the fees fixed for the wardens from the sale of Hunter's Licenses and the fines collected, that I can place the War-

dens on "Special Service" duty at three dollars per day and expenses. I take it for granted that I am only authorized to do this, where, in my opinion, the conditions and probable results will warrant it. I have been criticised by some for not having more "Special Service" work done, but I have taken the position that unless I am authorized to place more than one man in a county, giving him authority to arrest violators, to continue having only one man in a county on "Special Service" would mean a continuous outpour of the public money without satistory results, unless placed on special duty all the time. In some of the counties, where hunting is confined to certain well known sections, I have been able to get good results from only one warden's work, considering the fact that one man can only be in one place at one and the same time, and while it is true this Department was not created for revenue, I have not seen the need of having any more "Special Service" work done under these conditions than I have had done.

ENFORCING FISH LAWS.

As stated in my first report, it is very unfortunate for the Department and for the State at large, as well as the fishermen and fish dealers, that the Legislators who created this Department failed to enact laws providing for a revenue to the State for the teeming millions of fish that are being caught and shipped from the State continuously without any revenue to the people for this valuable asset. Florida has thousands of miles of salt water coast, which is strewn all along with fishermen ignoring the fact that there are Fish Laws and in absolute defiance of the officers of this Department. Those who have had the least experience in enforcing the Fish Laws know it is almost impossible to convict the violators after they are caught as well as almost impossible to catch them, and it is a well known fact that a large number of these men have organized in rebellion

against the enforcement of the Fish Laws and have agreed among themselves that when one is caught and fined in the courts for violations that he serves a sentence instead of paying a fine in cash, this meaning that instead of the county and officer profiting by catching the violator they lose every time this is done. When they do not pay the cash fine, the officer, regardless of what it costs him to catch the violators, gets no reimbursement. Again, there is a large number of fishermen, and I find that the larger per cent of them who are engaged in fishing for a living are willing to pay for the privilege of fishing. The principal objections to the enforcement of the Game and Fish Laws and providing for a revenue to be received for same are based on political reasons, and I am frank to say that there are being more objections found to such by county officials than there are by private citizens.

FISHING LICENSES.

It is clear to be seen that for this Department to succeed in the purpose for which it was created, and for its officials to carry out the requirements upon them, it is necessary to receive a revenue from the fishing industry of the State, in order to provide for sufficient employees to the Department to enforce the Game and Fish Laws. With sufficient assistants to patrol the waters of the State where fishing is carried on there is no doubt of being able to require practically all of the men fishing in this State to secure a "Fishing License," which, in my opinion, will bring a large revenue to the State. The value of the fish of the State as a food product warrants prompt action in making provisions for the protection of same. I do not believe there will be any strong opposition to a "Fishing License." The fishermen themselves are asking for a reasonable license to be fixed on each net, the same to be a conservation license for which they want protection. This is the only way to solve the problem as to how the inland counties of the State will get any revenue for their

A VETERAN HUNTER AND HIS DEER

portion of the fish that is being shipped from the waters of the State in which, from an ownership and commercial standpoint, they are just as much interested as the few counties which at present are getting the returns without cost to them or revenue to the proper owners.

FISHING IN THE FRESH WATER LAKES, RIVERS AND STREAMS.

For years fishing for commercial purposes has been going on in most of the important bodies of fresh waters of the State in such wasteful manner that has almost depleted the wonderful supply of fresh water fish of a few years ago. I can well remember when catching fish with a hook and line in the fresh waters of the State was not even looked upon as sport, because it was such a common thing to catch as many fish and more than was needed in most any body of fresh water in the State; but now it's a well known fact that fish are so scarce in the fresh waters that it has grown to be pleasing sport and only engaged in by those who are able to spare plenty of time and some money. When one thinks of this condition he can see the basis for the enactment of laws that would bring about another supply of fish in these waters. I cannot understand why one should be so selfish as not to be willing to sacrifice what there is in it for him now in trying to slaughter the almost depleted supply of the fish, for the gain it would be to the people of the State, especially to those who are to follow the present generation, in bringing about more favorable conditions in this respect, and when questioned personally and tried out in various ways it can be found that 90 per cent of the reputable citizens of this State favor protection and increase in the present game and fish supply, but they will not support their convictions by actions. Unless some provisions are made whereby the small fish in the fresh waters of the State will not be caught that depletion is inevitable.

PROPOSED PLAN FOR OPERATION OF GAME AND FISH DEPARTMENT.

It has been suggested by some that the Game and Fish Department of this State should be operated under a different system, comparing the system of the Game and Fish Departments of other States as a proposed system for this State. This suggestion has been brought about from the fact that in two or three States the Game and Fish Commission is composed of a body of men who receive no compensation for their work. The Game and Fish Laws are very strict in those States. The provisions of those laws are adequate for enforcement, all of which is by reason of the fact that *there is no game and fish to protect.* It is simply a Department for the propagation of game, birds and fish and the restoration and protection of such resources as have been practically depleted; and the further fact that there can be no revenue obtained from such resources to pay salaried officers. A person suggesting such a system as this should investigate these conditions before agitating the same, and also bear in mind that the States which are now not able to receive revenue for their game, birds and fish once had an almost unlimited supply, the same as Florida has now. In the State of New York alone the employees of the Conservation Commission receive more than Three Hundred and Thirty-five Thousand Dollars annually. The Commissioners receive Ten Thousand Dollars annual salary each for their services. In addition to the salaries paid by that Department there is additional expenses of over Four Hundred Thousand Dollars annually. All for propagation and restoration of the depleted supply of its needed resources. If one desires to determine how the people of the State of New York value their game, birds and fish, let them apply for a Hunter's License for the State of New York. Inevitable depletion alone in the supply of these natural resources brought about such rigid laws as are now valid,

THE MOCKING BIRD

not only in the State of New York but several States in the Union, and not until the supply was practically depleted did the lawmakers of these States wake up to the fact that the restoration of these natural resources was necessary and could only be had by the most rigid laws to govern same. In addition to these facts it is known that these States which have Game and Fish Departments, with the executive officers receiving no salary, are interior States in which there is a great deal of development and practically no natural waters or forests.

FISH AS FOOD.

It is, of course, needless to dwell at length upon the high cost of living at the present time, though proper reference relates to the subject at hand. Statistics which I have gathered show that meats of various kinds, other than fish, make up between 40% and 45% of all food stuffs, including fruits. That is to say: At the end of every six months add together the bills for each month for foodstuffs, including groceries, fruits and meats, and the meats alone will make up 40% to 45% of the total amount. In my home it will average 65% to 70%. It is a well known fact that meats have been advancing in price for twenty years, slowly but surely, and until it has reached a price that the average family can scarcely afford to have meat. No person can deny that if our fish was properly protected and cultured they could easily be made to supply the entire State for food purposes. It is more of a FAD to buy high-price beef steaks and pork roasts than it is a NECESSITY. Most of us crave that which costs most and hardest to get. This is foolish, but it's true. We look upon the meat of fish as such a "CHEAP" and "EASY TO GET" article of food that it makes it undesirable, because we are "living too high," without due regard for our future. If the present waste of our fish supply continues conditions will be reversed. In a few years it will be impossible to get a

decent fish at any price by any one, except from private waters, where fish are planted and cared for. In my opinion the high cost of living has been brought about by this same view being taken of all of the most common and staple articles of food by persons who are eager to outlive the other fellow. A closed season on fishing for five years is being agitated now. With a closed season of five years on all kinds of fishing in all of the waters of the State of Florida we would not only be able to feed the population within the State's borders, but the teeming millions of the country could be supplied from our waters with the best and cheapest meat product in the world; but as I see it a closed season is not necessary, except during the breeding season, provided provisions are made to regulate the industry as to the manner of catching fish. The only way to do this without direct expense upon the State is to provide for a fishing license.

Another reason that public sentiment does not agitate the value of fish for food is, that it is not divided particularly, but a large per cent of the farmers who raise their meat do not value the cost of it as the town or city citizen has to value it. Yet there is no reason for his failure to compare the values of these two meat products, as there is always a market for both. Good many States of the Union are spending annually hundreds of thousands of dollars for fish for food. The State of Vermont alone used for food during the year of 1914 fish meats valued at $502,000, more than 4% annual dividend on $12,500,000. This does not include the fish that was taken for food from private waters, or does not include fish caught by persons consuming all of their catches, but speaks only from a commercial standpoint. The importation of fish for food into the City of Boston during January, 1915, was valued at $203,859. Since the outbreak of hostilities the price has doubled and still going up.

STATISTICS ON FISHING INDUSTRIES.

From the information I have been able to gather, under the limited provisions, I find that Florida, Alabama, Mississippi, Louisiana and Texas comprise the most important Southern States that have fishing industries. The information presented applies only to coast fisheries of commercial importance, prosecuted in the salt waters, and does not include the fisheries of the interior waters of these States. The number of persons employed during 1914 in the different industries in the above named States were approximately 150,000 men; 110,000 were engaged as fishermen in vessel and shore fisheries, and 40,000 as shoremen in haul-seines fishing establishments, canneries and other branches of industry connected with fisheries. Florida employed and supported 60,000 persons, Alabama 40,000, Mississippi 30,000, Louisiana 10,000, Texas 10,000. The total amount of capital invested is estimated at $47,000,000, of which about $17,200,000 is invested in Florida. This investment, of course, includes real estate, boats of all kinds and things that go to complete fishing equipments. The products of these fisheries in 1914 is estimated at 1,150,000,000 pounds, with a value of $135,900,000.00, and of this quantity the coasts of Florida alone produced 480,200,000 pounds, valued at $14,600,000.00.

The government statistics gives the west coast line of Florida a distance of 2,810 miles of actual water front. Of this most of the shores are low and indented with numerous bays, sounds and laggoons, which furnish good harborage for light fishing vessels. The principal waters for fishing are Perdido Bay, Pensacola Bay, Santa Rosa Sound, Choctawhatchee Bay, St. Andrews Bay, Apalachicola Bay, Wiccassasee Bay, Clearwater Bay, Tampa Bay, Charlotte Harbor, Marco Pass, Hickory Pass, Ostego Bay and San Carlos Bay. The principal waters for fishing on the east coast are Cumberland Sound, Nassau Sound, St. Johns River, Halifax River, Indian River, Biscayne Bay,

Chockolishee Pass. Florida leads the other Gulf States in the catch of Bluefish, Mullet, Pompano, Redsnapper, Grouper, Spanish Mackerel, Turtle and a number of less important species. The principal fish used for food caught from the waters of Florida are:

Amberfish.
Angelfish.
Barracuad.
Black Bass.
Bluefish.
Bonito.
Butterfish.
Catfish.
Channel Bass or Redfish.
Crevalle.
Drum (salt water).
Flounders.
German Carp.
Groupers.
Grunts.
Hogfish.
Houndfish.
Jurel.
Kingfish.
Ladyfish.
Margatefish.
Menhaden (mostly for oil and fertilizer).
Moonfish.
Mullet.
Pigfish.
Pike and Pickerel.
Pompano.
Porgy.
Porkfish.
Sailor's Choice (or Pinfish).
Sardines.
Sea Bass.
Sheepshead.
Snappers (red).
Snappers (other).
Spanish Mackerel.
Spot.
Sturgeon.
Sturgeon (caviar).
Suckers.
Sunfish.
Tang.
Trout (or Squeteague).
Trunkfish.
Turbout.
Whiting.
Yellowtail.
Clam.
Conch.
Crab (hard).
Crab (soft).
Crab (stone).
Crawfish.
Oyster.
Shrimp.
Terrapin.
Tortoise Shell.
Turtle.
Turtle Eggs.

Commercial fishing is carried on in every coastwise county of the State. Monroe, Escambia and Hillsboro Counties have the most important fishing interests, Monroe leading in nearly every particularly, owing principally to its extensive vessel and shore fisheries. Hillsboro occupies second place in most respects, and the most important catches of fish are Red Snapper and Mullet. Every county will show a substantial increase in these industries from their beginning, until about three years past.

Twelve counties participate in the vessel fisheries, the products being secured with purse and haul-seines, gill nets, lines, spears and various apparatuses. Four-fifths of the total catch of the vessel fisheries consists of Red Snappers, Groupers and Kingfish. In the seine-fishing, the Spanish Mackerel and Mullet occupy first place. Many of the vessels operating from the shores of Florida visit the coasts of Yucatan, Mexico and Honduras and engage in the fisheries, plying to and fro as markets and seasons vary.

Of the shore fisheries gill-net-fishing is by far the most important, and Mullet is the principal fish sought. The Sea Trout occupies second place in quantity and third place in value; the Pompano occupies third place in quantity and second place in value; other leading species caught for commercial purposes are Sheepshead, Channel Bass, Spanish Mackerel and Sturgeon. Turtle fishing from the shore of Florida is a large industry within itself. Over 2,000,000 pounds of turtle meat, saying nothing of the millions of turtle eggs, are shipped from this State annually. The meat of the sea turtle is considered one of the finest meat products for food, saying nothing of its uses for soups. The principal species of turtle are the green, logger-head and hawksbill. The green turtle is the most sought after for food. The hawksbill furnishes the tortoise shell for commerce. The information which I have been able to gather convinces me of the numerous opportunities of the enlargement of the fishery products of the State. These products are sold principally in fresh or salted condition, very little canning being done compared with the amount being sold otherwise. During certain seasons the markets are crowded with fresh fish, and fishermen are compelled to suspend fishing until the glut is over, which means a heavy loss to them at intervals. Smoking houses and canning factories would create a steady demand for fish and prevent such gluts in the fish markets. The State has a great variety of animals along

her immense coastline, the meat products of which could be added to the canning industries, but lack of energy, capital and experience with which to prepare for market what is known as "secondary products" prevents the State from occupying a much higher place as regards canning factories and fisheries. Again, we have not let the world know what the possibilities are in this respect.

GAME FISHES.

"IS YET TO BE LANDED"

The grandsire sat in his easy chair,
And his laugh was a gurgling croak,
While the grandson told of a monstrous fish
He had hooked on a line——which broke.
Then the old man gravely smiled and said:
"My dear boy, it is large I know,
For I hooked that same old fish myself,
Some fifty-odd years ago."

Florida is famous for its game fishes, being the home of the tarpon, the greatest game fish in the world. The jew fish is also a large game fish, reaching a weight of four to five hundred pounds, and while very sluggish is very game when hooked. One of the most sought for small fish by sportsmen is the hog-fish. It is caught thirty to sixty feet under the waters and weighs, when grown, from twelve to eighteen pounds. It is estimated that not less than five thousand non-resident sportsmen fish for sport in the waters of Florida each year, who would be willing to pay five dollars for a Fish Conservation License.

VALUE OF WILD LIFE IN FLORIDA.

Florida is inhabited with three hundred and seventy-five different species of birds. There are not this many different FAMILIES of birds as there are several different SPECIES of some FAMILIES. Not many States in the Union have this number of different species of birds. The names

WILD TURKEY, THE ARISTOCRAT OF THE FOREST

of all these different species will be found in some other part of this report for information.

There is not a species of all these different kinds of birds, nor there is not a bird of any species in the State of Florida but what has some value for some purpose. Of course there are many species looked upon as being without value. The biggest pests among all the birds of the State is what is known as the English Sparrow, Sharp-shinned Hawk (commonly known as the Blue Darter), Great Horned Owl, Crow, Rice Bird, Meadow Lark, Jackdaw and Butcher Bird. None of these birds are protected by the laws of the State, yet there are some farmers who would not allow the Crow or Jackdaw killed upo ntheir places from the fact that they are to be seen around the cow pens every night and morning catching ticks from the cows. The smaller species of birds are practically all insectivous birds, living on insects or seeds and various waste matters. The various agricultural States furnish statistics estimating that millions of tons of grass seeds are devoured by the smaller species of birds annually. The farmers in the best agricultural States know the value of these birds and will not permit of them being killed.

Florida is also inhabited by a large number of different species of wild animals. While the species do not number with that of the birds, I am unable to get statistics giving all of the species of wild animals, though it is known to be enormous. I have endeavored to secure in the best way possible some information as to the number of each of some of the more important wild animals and birds of the State, such as deer, squirrel, otter, turkey, quail, etc., and a statement is given in another part of this report pertaining to them.

When this Department was created Florida quail was being shipped to various States and countries at not more than fifty cents each, and the price generally was twenty-five cents each. By reason of the fact that I have refused

for animals and birds to be shipped from this State for commercial purposes, prices have been steadily going up. There is a ready market for quails at thirty dollars per dozen; wild turkey hens, twenty dollars each, and gobblers, sixteen dollars each; wild otters, twenty-five dollars each; foxes, twenty dollars per pair; o'possums, twelve dollars per pair; coons, six dollars per pair; deer, fifty dollears each; skunks, five dollars each. There is not a wild animal in the State but what has its value for some purpose. I am in receipt of a letter from Dr. C. A. Harper, State Health Officer, Madison, Wisconsin, as follows:

"State Board of Health,
Madison, Wis., January 21 , 1915.

Mr. E. Z. Jones, Commissioner,
Department of Game and Fish,
Tallahassee, Florida.

Dear Sir:—Under recent date you asked information concerning the value of game for food and the reasonableness of provisions for protection of the fish and game of your State.

In reply to your first question, I will state that there is no better food than that of the meats of game animals, which include birds and fish. The life that these animals live is a natural normal one. Their instinctive powers of food selection makes the various species a constant characteristic feature. Therefore, eliminating artificial conditions, it is safe to assume that the game birds and fish are as near normal as a normol condition can be obtained in any living creature.

It is a well known fact in the medical profession that many delicate people will take the meat of game animals, digest it and thrive on it, where the meats of domestic animals will cause distress and prove detrimental to the consumer.

No careful physician, in my judgment, can render any

QUAIL (BOB-WHITE)

other conclusion than that which I have just stated, and it is not an uncommon occurrence for physicians to recommend their patients to locate, temporarily at least, in a locality where plenty of the wild game can be obtained as an article of food. I feel, therefore, that purely from a culinary standpoint, a great good can be done a large number of people through the preservation of fish and game birds and animals.

People usually go to a locality where the game can be found and the meat from such game can be used fresh, rather than to have such meats prepared, canned or kept in cold storage and transported to various parts of the United States. Unfortunately, many of the meats that we now consume from the domestic animals are of the cold storage type and frequently found injurious rather than beneficial, and have many times wondered why a State like Florida, where climate conditions are ideal, had not long before enacted into law certain specific regulations for the protection of the fish and game.

In fact, over a year ago, I wrote the Governor of Florida, calling his attention to the importance of some specific regulation for the better protection of the game of that great Commonwealth.

In addition to its climate and fruit-growing ability, no other asset is greater to the State of Florida than its fish and game. This is purely from a commercial standpoint.

From a standpoint of food, Florida is able to offer to the people of the United States, if you establish proper regulations for the protection of your game, fish and animals, that which no other State can offer, and, therefore, will be of material benefit in bringing back to health many a poor fellow who has become ill and is suffering as result of the artificial ways of handling meats in the United States.

I might add, that on the 17th of January, 1914, after a long illness from digestive disturbances, I took a trip to

Florida that I might not only enjoy the benefits of the climate, but also that I might partake of the fresh fish and wild game which were so abundantly furnished in that State. My month's sojourn there, however, convinced me that unless Florida became more active in proper State regulations of its game and fish laws, that it would soon lose one of its most valuable assets that it could possibly have, and I believe that from a health and commercial standpoint no greater advance could be made by the State of Florida than to establish reasonable and proper regulations for the protection of its fish and game, all of which should be put under State control instead of the county system, as is now apparently more or less the custom.

There is no need for the extinction of any form of game in the United States. The Federal Government has taken some action in regard to the migratory bird, and I certainly believe that it is the duty of every State to take action in the preservation of that form of game which is more or less indigent to the States respectively.

The amount of food that such game furnish cannot be reasonably estimated; that it is enormous cannot be questioned; that it is valuable to every civilized citizen cannot be argued, and, therefore, laws advancing such a protection should certainly be enacted, not only by your State, but by every other State where game plays such an important factor in the support of the human race.

Sincerely yours,

C. A. HARPER,
State Health Officer."

I could get letters of this nature from reputable physicians all over the world. It is evident to me that the Game and Fish Department of this State should be provided with means to increase and protect wild life of the State and make provisions for industries that could be established in the disposition of the wild animals, birds and

GATHERING IN THE WILD DUCKS

fish of the State. Game preserves should be set aside for breeding and protection to different kinds of wild animals and birds, as well as spawning grounds should be set aside for the purpose of raising and increasing the present supply of fish. In 1912 Nebraska spent $8,000 for improving one fishery at Gretna and one at Valentine, $5,000 for the purchase of game birds in efforts to restore its former but now depleted supply. To fully protect wild life of this State we should also have laws to protect our forests. The inherited wealth of wild life, forests and mines of the American people has been wasted for ages. The young persons of today are to inherit the game of the forests, the birds of the air, and the fish of the streams, all told being the cheapest, most healthful and most available food supply for the entire continent, if properly cultured and protected, but only recently have the people come face to face with the fact that if this great country of ours continues to be a land of plenty, these birthrights must be conserved.

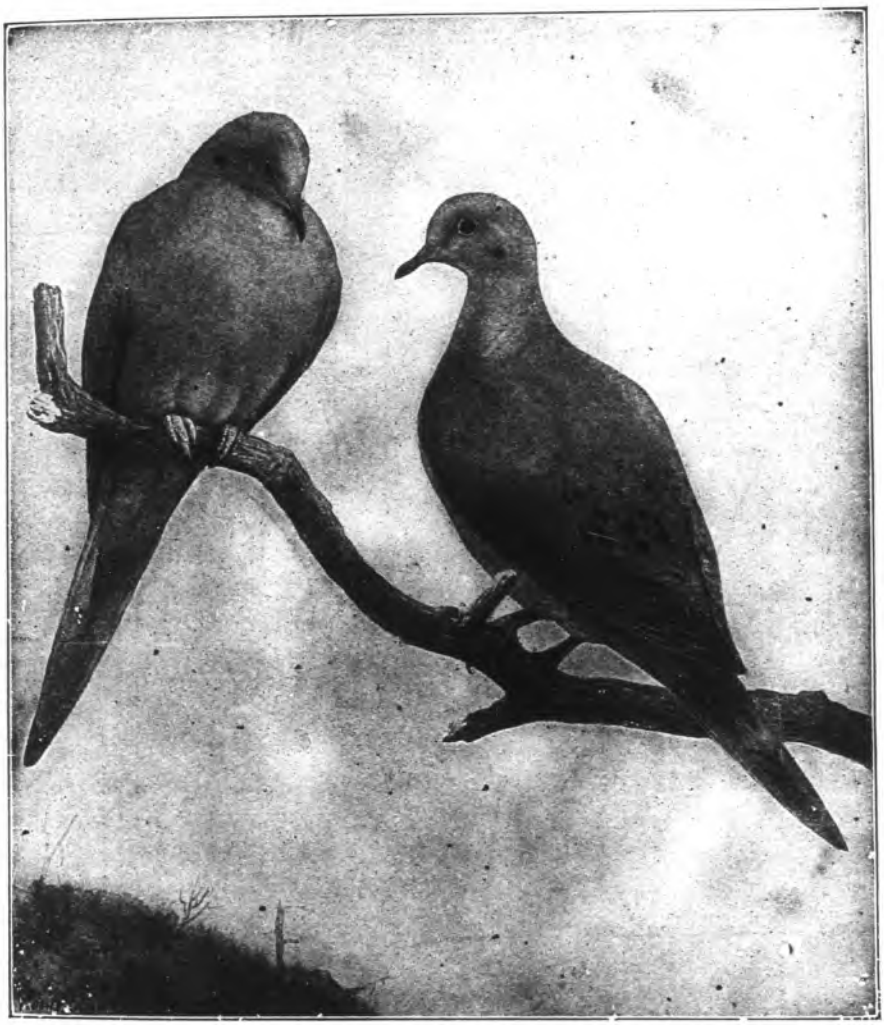
The average citizen of today looks to the political leaders as leaders of society and conservation. When these leaders are not considerate in increasing the inherited and available assets of their constituents, their constituents suffer losses unobserved by themselves. Fortunately a sufficient number of those leaders have within the past few years been mindful and considerate of the inevitable depletion of our game, fish and forests. From such consideration laws have been enacted, both national and State, for their conservation. Some States, however, one of which is Florida, have been slow in the enactment of laws with reference to foresty. Having been raised in Florida, under all of the burdens of misfortune, I am able to personally testify as to the value of game and fish as a "live-saver," and I have watched for twenty-five years the wholesale slaying of our forests by the producers of timber products, who were unmindful that they were wasting more than they were manufacturing, and in addition to wasting

the timber, burning, if possible, every sprig of grass and weed that might have grown to culture the farmer's lands. Most of these manufacturers owned no land, so why should they protect it? The farmers themselves have been inconsiderate of the good of saving the trees and grass. With a bountiful supply of truck, fruit and staple products to exist on "until next crop," and with lands and seasons with which failure is almost impossible, they have taken the position that "this is all I need and the balance I will not even help the other fellow to protect," all of which go to further decrease our present supply of natural resources.

The courts of America, from justice Courts to Supreme Court of the United States, are rendering opinions where these subjects are at issue, to the effect that by reason of the unlimited advantage to farmers of forest protection, and by reason of game and fish being such a valable and easily increased food supply, that each State has a right to enact and enforce laws governing the disposition of them; that they belong to the State, not as a proprietor, but to conserve the people's unlimited food supply. The age and experience of the court officials referred to, in most instances, qualifies them to render opinions relating to the subject in hand, and where men of such position are upholding the laws that are being enacted for the public good, it is time that the average citizen of every State, especially the taxpayers, wake up, lay aside all selfish motives, and consider, not only their own welfare, but the welfare of others who are in existence and of those who are to follow after them.

GRAND JURY TO COUNTY JUDGE.

I recently received in my correspondence a clipping from a newspaper giving that portion of the minutes of a meet-



MOURNING DOVES

ing of a Grand Jury relating to the Game and Fish Laws. The Grand Jury's report is as follows:

> "We regret to advise that we found it necessary to have our County Clerk and County Auditor make us a detailed report on the status of our County Judge's docket, relating to the cases of violation of our Game Law. We found from this report that thirty-six (36) cases have been docketed, and that seventeen (17) of them were found guilty and fined from $5.00 up and costs; that two (2) were nolle prossed for lack of evidence; that no disposition had been made of four; one sentenced to jail; one case appealed to Circuit Court, and one case was suspended on paying the costs. We also found that in one instance our County Judge had booked a sentence of four months at hard labor and authorized our sheriff to release the party on payment of $100.00 and costs.
>
> "We respectfully call the attention of our County Judge to these irregularities, and we hope that he will refrain from them in the future, of which we feel confident that he will do."

This Grand Jury's report relates to County Judges docketing cases against violators of Game Laws. Further referring to the above, for reasons given in other parts of this report, I have been unable to secure the proper cooperation of the court officials of the State. I am frank to say that I have received generally more service in the prosecution of cases from the Justices of the Peace than I have from the County Judges. However, a few of the County Judges are very strict in their efforts to enforce the Game and Fish Laws and give me a great deal of assistance.

NEW YORK CONSERVING NATURAL RESOURCES.

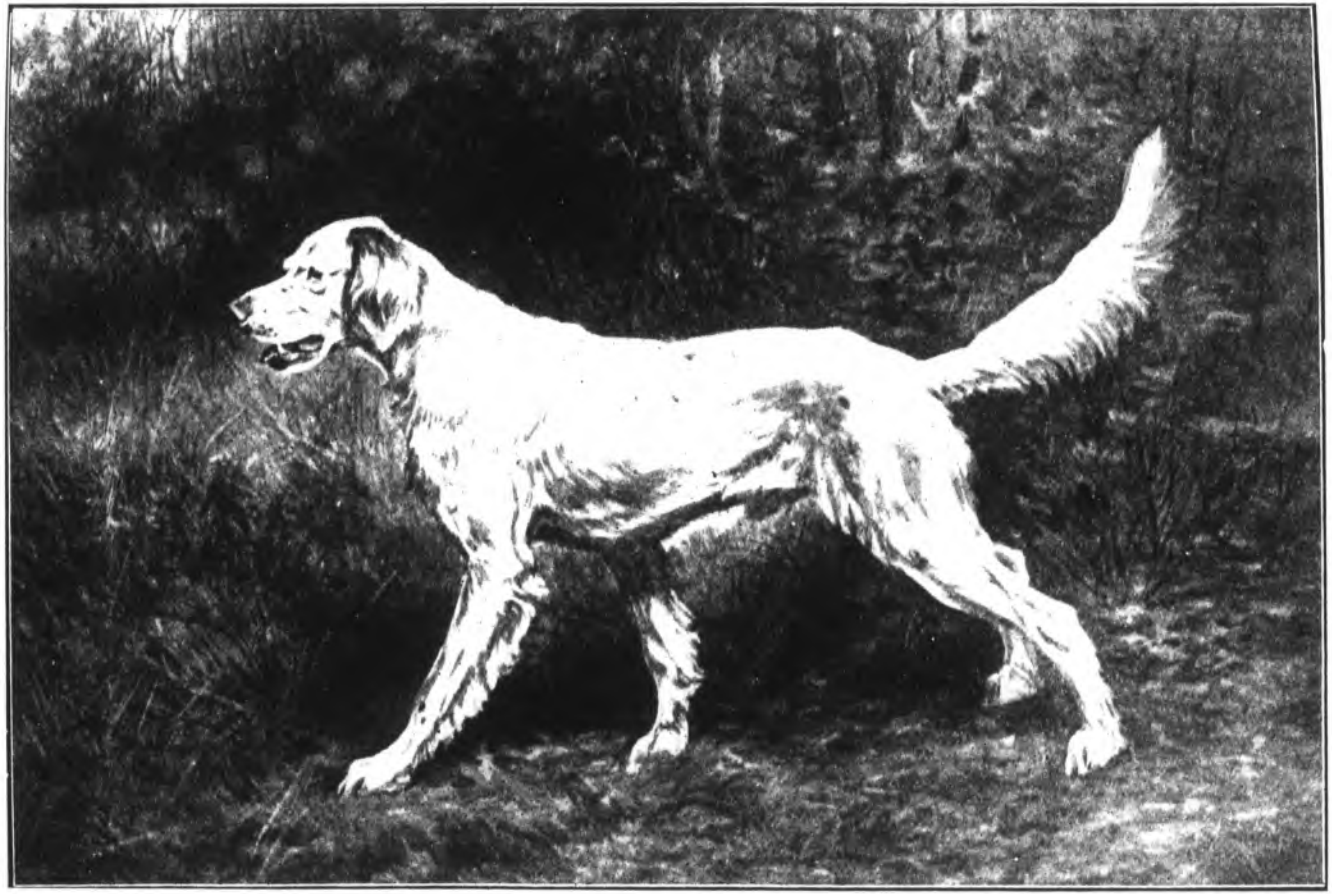
Can the State of New York, which is spending annually over $750,000 to protect its natural resources, compare

the value of its resources with the natural resources of the State of Florida? Can the farmers of the State of New York enjoy the advantage of forest laws that the people of the State of Florida could enjoy? Have not the political leaders of that great State seen the necessity for the conservation of these valuable assets to their constituents, and against public opinion enacted laws for their protection? Years ago the State of New York was blessed with such a supply of game, fish and forests that the leaders of that State were unconscious of the value and needed protection to those assets in order that the teeming millions of people who today reside in that State could be benefited by that protection. Now they are practically without.

The Bureau of Biological Survey of the United States Government, under direction of the Department of Agriculture, is engaged in a survey of several States, and as soon as they finish the State of Alabama, in which they are now engaged, they will begin in Florida. This means an investigation of the bird and mamal life of the State in its relation to agriculture, and detailed report on the distribution of each species. The result of this work will, of course, be compiled and published and will contain a great deal of interesting and valuable information to every citizen of the State.

STATISTICS OF ANIMAL AND BIRDS.

The information shown as to the number of each of some of the different kinds of animals and birds of this State was arrived at by securing from each county estimates of different persons and making such allowances as would seem proper, and while it's more or less guess work a certain degree of accuracy may be placed upon it. The value compiled on the few animals and birds given, without the dogs of value, totals nearly $43,000,000. Suppose that we are 100 per cent too high on the estimate in num-



A FIELD TRIAL WINNER

ber of each and 100 per cent too high in the value; it still leaves at this figure a value of over $10,700,000. As to the number and estimate of animals and birds we are, of course, not sure, but as to the value given in the report, as shown, these prices are quoted from prices offered for these animals and birds at which they can be sold in the markets today. This information is given to show how much in excess the value of these animals and birds are to the people of Florida *ALIVE* than they are DEAD. We know that they have no such value when *DEAD* as that offered FOR THEM ALIVE. It is also seen that only a few species of animals and birds are given, when, as a matter of fact, there are hundreds of species not given, and each animal and bird of every species has a value, which, with sufficient time, I can show. Every mocking bird in Florida can be sold at $5.00 each.

NECESSITY DEMANDS PROTECTION OF NEEDED RESOURCES OF FLORIDA.

There is not a natural resource of the State relating to commerce but which has been on the decrease for years. The virgin forests, the mineral beds, animals, birds and fish suited for food, have been largely consumed. Consumption is the part of economics which treats of the relation between wants and the means to their satisfaction. The characteristics of wants first demand attention, then a supply is sought. It is a familiar fact of human experience that wants are indefinitely numerous. Each day in the consciousness of a normal person many wants are felt which must perforced go unsatisfied. At times one may delude one's self with the belief that if only one pet desire was gratified perfect content would follow, but over and over again the discovery is made that when the wished for gratification comes other desires have in the meantime arisen in its place and satisfaction is as far off as ever. The normal man, therefore, is thus a being whose wants

constantly run ahead of his ability to satisfy them. Upon this fact is based a law that the consuming power of a community is indefinitely great. The intensities of want determine degree of utility, and thus, as shown later, have great influence in fixing the value of economic goods in which utilities are embodied. Valuable as they are in intensity all wants are subject to a law of gradual diminution, and finally satiety if consumption is continued. This may be illustrated by reference to food. One, when given a breakfast of unlimited food, attacks the first plateful when hungry with great desire. His eagerness is reduced by each additional plateful until his hunger is satisfied, and he must reluctantly confess that he has had enough. As an individual's capacity to enjoy food is limited, so is his capacity to enjoy clothes. A normal person feels intensely the need of one respectable suit of clothes. A second suit is less indispensible but satisfies a lively desire. Additional suits satisfy wants of steadily diminishing intensity, and in time the point of satiety is reached even by the most fastidious dandy. Eyes tire of beautiful scenes, ears are deadened in time by even the sweetest music. In short, any vacancy might be filled and any supply depleted. Supply of anything, when a certain amount of it is continuously consumed, must be depleted, because it is limited. It is known that the farmer's land, if continuously worked without assistance to help produce, that the amount of yield will soon be diminished. It is known with relation to any natural product that if continuously used for consumption the supply will in time be depleted, regardless of the amount intact. We know that regardless of the amount of any resource that it does not pay to extract it at too heavy or rapid rate, nor does it pay to utilize too fully even the largest water power where such power is a necessity, without adding to the supply, which is always limited. In assuming the work of this Department little had entered my mind compared with what I now know with relation

DEER FARMING IS PROFITABLE

to provisions to protect the needed resources of the State, and regardless of the time which I might remain in the work the short time I have been in it has been a great schooling for me and I would be ungrateful to you for placing me in such an honorable position, if, with the knowledge I possess at present with relation to the natural resources of the State, I do not continue in my best efforts to restore and protect them the balance of my life.

PENNSYLVANIA RECOMMENDS VARIOUS OPEN SEASONS.

The report of the State of Pennsylvania, recently issued for 1914, recommends that various seasons should be prescribed for hunting different animals and birds of the State, in which I disagree, except to the extent that investigations show the season for killing buck deer in this State should be August, September and October, as at this time of the year they are best suited for food. I agree with its recommendations that bounty should be offered for such vermin as may be found in the State and known to be destroyers of young animals and birds, such as homeless dogs, wildcats, and others too numerous to mention. In my report for 1913-14 I stated that there were not less than twenty-five thousand worthless dogs in the State of Florida and some of the newspapers of the State tried to make a joke of that estimate. Statistics from each county of the State show, however, that there are over 60,000 worthless dogs and 6,245 valued at $136,125.

GAME BREEDERS' LAW.

There is, in my opinion, an opening for a great industry for the people of the State of Florida in raising wild game for markets. Some take the position that it would decrease the sale of Hunter's Licenses, in which I disagree

with them. It will give profitable employment to thousands of laborers. We have millions of acres of land upon which can be raised an unlimited supply of wild animals and birds, every pound of meat of which has a ready market at high prices. There is no argument as to the possibility of raising these animals and birds. Every farmer can have a Game Farm at a profit. A License Fee should be required of each person operating a Game Farm. Game Breeders' Laws have resulted in building up a profitable industry in other States. They have improved the shooting instead of injuring it, because the game will overflow from the farms and increase the woods' supply. This is a matter that should receive consideration by the Legislators.

FLORIDA ZOOLOGICAL PARK.

Nothing would create more interest in the wild life of Florida than a State Zoological Park. If sufficient provisions were made to establish a park near some good city of the State it would be more than self-sustaining, and it would not require very much to establish a park and place therein a pair of each and every wild animal, bird and fish of the State.

PROSECUTING VIOLATORS OF GAME AND FISH LAWS.

From September 1, 1913, to March 1, 1914, I prosecuted one hundred and nineteen persons for violations of the Game and Fish Laws of this State, and there were judgments rendered amounting to $2,694.86. Since March 1, 1914, I have prosecuted four hundred and thirteen persons, resulting in judgments of $7,375.75. Total amount of judgments for the eighteen months since the Department was created amount to $10,070.61. In most cases the court officials are not placing the proper fine upon these

violators, which makes it very hard to enforce the laws. Again, the Attorney General of the State has ruled that where a violator is found guilty and sentenced to serve a term of imprisonment that there is no fee coming to the Warden for such a fine. In numerous cases where violators have been convicted and served terms instead of paying fines the Wardens spent considerable money in apprehending them. This works a hardship on the Warden and causes more or less neglect of his duties of office. For an official to continue to spend money in any work he must get a revenue in return or he cannot afford the expense necessary to apprehend the violator.

Receipts and Expenses of Department from March 1, 1914, *to March* 1, 1915.

RECEIPTS.

Received from Hunters' Licenses	$42,177.50
Received from Permits issued	31.00
	$42,208.50

EXPENSES.

Salary of Commissioner	$ 2,500.00	
Salaries to Clerks	997.00	
Printing	1,445.00	
Postage and Parcel Post	591.02	
Office Furniture and Fixtures	228.90	
Traveling Expenses	582.13	
Express and Freight	40.56	
Incidentals	72.55	
Telegraph and Telephone	72.91	
Attorneys' Fees	45.00	
Fees paid County Wardens	8,616.50	
Fees paid County Judges	3,343.25	
Special Services	2,372.87	
Total expenses March 1, 1914, to March 1, 1915		22,908.04
Receipts above actual expenses		$19,300.46

NUMBER OF ANIMALS AND BIRDS IN EACH COUNTY, AND VALUE OF EACH

COUNTIES.	Deer, $25 each.	Squirrels, $2 each.	Bear, $25 each.	Coons, $2 each.	Wild Cats, $10 each.	Otters, $50 each.	Opossums, $3.50 each.	Skunks, $10 pair.	Quail, $36 dozen.	Turkey, $20 and $16 each.	Ducks, 50c each.	Cranes, $25 each.	Worthless Dogs, No value.	Valuable Dogs, $5 each.
Alachua	15	10,000	10	6,000	200	300	7,000	4,000	40,000	100	20,000	.....	1,000	75
Baker	30	2,000	5	2,000	100	25	2,000	1,000	5,000	100	*	10	700	25
Bay	400	40,000	.....	5,000	1,500	500	7,000	6,000	30,000	300	15,000	50	250	50
Bradford	.....	4,000	.....	5,000	1,500	500	7,000	5,000	4,000	300	2,000	500	900	500
Brevard	300	5,000	*	5,000	300	200	1,000	500	20,000	300	10,000	100	700	500
Calhoun	150	10,000	10	2,000	100	100	2,000	2,000	20,000	100	10,000	10	700	10
Citrus	500	10,000	100	2,000	500	1,000	2,000	10,000	75,000	1,000	1,000,000	500	600	50
Clay	15	5,000	.....	2,000	300	50	1,000	2,000	15,000	200	10,000	.....	500	150
Columbia	15	1,000	10	1,000	100	100	2,000	1,000	10,000	150	500	10	700	20
Dade	25	1,000,000	150	10,000	700	1,000	8,000	6,000	20,000	50	15,000	.....	300	200
DeSoto	600	15,000	50	10,000	250	250	8,000	5,000	25,000	350	200,000	200	800	100
Duval	15	5,000	10	1,000	100	.....	1,000	1,000	5,000	50	*	.....	1,800	200
Escambia	100	10,000	100	2,000	100	50	1,000	1,000	10,000	100	250,000	10	1,500	250
Franklin	400	20,000	100	8,000	1,000	1,000	10,000	8,000	5,000	800	12,000	400	1,000	400
Gadsden	25	5,000	.....	2,000	50	25	2,000	2,000	30,000	200	200	50	4,000	50
Hamilton	10	2,000	5	500	150	50	600	500	4,000	150	*	50	700	100
Hernando	400	7,000	300	100,000	1,000	1,500	8,000	4,000	1,000,000	2,000	1,000,000	25	700	400
Hillsboro	100	10,000	.....	5,000	500	200	5,000	3,000	1,000,000	200	1,000,000	25	1,200	1,000
Holmes	10	10,000	.....	3,000	1,000	200	4,000	1,000	20,000	50	10,000	25	3,000	300
Jackson	25	1,500,000	.....	20,000	2,000	150	7,000	50,000	1,000,000	800	1,500	.....	5,000	75
Jefferson	500	700,000	200	15,000	1,000	1,000	10,000	10,000	50,000	1,500	1,000,000	500	4,000	100

Lafayette	800	2,000,000	100	10,000	400	100	3,000	2,000	[illegible],000	2,000	200,000	200	700	50
Lake	200	8,000	100	2,000	250	100	2,000	1,200	700,000	500	20,000	100	500	20
Lee	1,000	12,000	200	3,500	250	250	3,500	2,000	1,000,000	550	2,000,000	150	350	200
Leon	250	10,000	.....	2,500	500	300	7,500	3,500	40,000	600	150,000	50	1,000	50
Levy	600	12,000	150	6,000	2,000	200	8,000	6,000	70,000	1,000	200,000	100	2,000	20
Liberty	200	5,000	100	2,000	50	50	3,000	1,000	10,000	175	*	*	5,000	50
Madison	500	15,000	200	1,200	2,000	1,000	6,000	4,000	40,000	300	100,000	100	550	25
Manatee	200	500	.....	3,000	1,000	200	2,000	1,000	25,000	500	200,000	200	700	100
Marion	600	10,000	50	2,000	500	100	5,000	2,000	30,000	500	200	50	1,000	10
Monroe	200	500	400	20,000	2,000	700	5,000	1,000	5,000	500	200,000	10	2,000	50
Nassau	100	10,000	10	7,000	1,000	200	8,000	5,000	20,000	500	150,000	25	1,000	60
Orange	400	800	100	1,000	500	600	800	1,200	60,000	400	5,000	100	500	100
Osceola	600	5,000	50	2,000	2,500	750	5,000	5,000	50,000	600	50,000	250	1,000	50
Palm Beach	500	1,000	15	10,000	600	5,000	500	50,000	75,000	1,000	25,000	25	600	25
Pasco	200	12,000	75	2,000	100	50	2,000	1,000	25,000	250	500,000	25	600	100
Pinellas	15	4,000	2	3,000	200	100	2,000	500	15,000	300	20,000	10	500	200
Polk	200	12,000	25	9,000	2,000	2,000	8,000	12,000	50,000	2,000	5,000	1,000	400	50
Putnam	100	10,000	25	2,000	50	50	1,000	500	25,000	150	*	15	700	75
St. Johns	300	6,000	20	3,000	300	50	2,000	20,000	30,000	500	10,000	25	1,000	60
St. Lucie	400	20,000	11	6,000	700	500	4,000	12,000	40,000	300	70,000	200	200	100
Santa Rosa	500	100,000	25	15,000	500	500	10,000	12,000	60,000	10,000	8,000	100	600	100
Seminole	100	5,000	.....	1,000	10	.....	1,000	500	5,000	100	*	.....	600	200
Sumter	100	10,000	2	5,000	1,000	600	10,000	9,000	90,000	1,000	10,000	10	1,000	10
Suwannee	100	10,000	25	2,000	25	25	1,000	500	25,000	200	*	15	500	20
Taylor	400	8,000	150	2,500	150	100	2,000	1,500	100,000	350	100,000	50	300	50
Volusia	250	10,000	50	8,000	500	200	6,000	6,000	30,000	1,000	30,000	60	600	25
Wakulla	500	10,000	100	4,000	400	500	2,000	1,000	20,000	600	40,000	10	400	50
Walton	500	40,000	6	5,000	125	3,000	7,000	6,000	30,000	300	15,000	50	250	100
Washington	10	10,000	5	2,000	100	500	700	800	40,000	500	1,000	5	600	250
Totals	13,460	5,744,000	3,051	258,200	32,225	28,425	276,600	291,200	6,169,000	38,175	7,720,400	5,375	50,100	6,715

*Few.

REPORT OF HUNTERS' LICENSES SOLD FOR SEASON OF 1914-15

	Non-Resident Licenses Sold in Each County.	State Licenses Sold in Each County.	County Licenses Sold in Each County.	Fees Paid Each County Judge From Licenses Sold.	Fees Paid Each County Warden From Licenses Sold.	Net Amount Returned to State Treasurer From Each County.	Gross Receipts From Each County.
Alachua	21	211	465	$ 174.25	$ 285.75	$ 954.00	$ 1,413.00
Baker	.....	13	42	13.75	17.00	50.25	81.00
Bradford	.....	77	67	36.00	55.25	206.75	298.00
Bay	1	25	139	41.25	50.25	137.50	229.00
Brevard	2	117	281	115.00	314.75	1,132.25	1,562.00
Calhoun	.....	34	68	25.50	34.00	110.50	170.00
Columbia	1	52	133	46.50	62.25	195.25	304.00
Clay	22	28	148	49.50	117.00	395.50	562.00
Citrus	33	38	113	46.00	146.25	529.75	722.00
Duval	1	656	834	372.75	539.50	1,904.75	2,817.00
Dade	3	44	227	68.50	87.75	247.75	404.00
DeSoto	13	314	681	252.00	366.25	1,199.75	1,818.00
Escambia	.....	158	432	147.50	187.00	571.50	906.00
Franklin	.....	77	53	32.50	51.75	199.75	284.00
Gadsden	2	58	182	60.50	80.50	245.00	386.00
Hillsboro	3	664	1,518	546.25	720.50	2,288.25	3,555.00
Holmes	1	81	63	36.25	59.25	225.50	321.00

Hamilton	.....	28	32	15.00	22.00	79.00	116.00
Hernando	4	74	478	139.00	168.50	452.50	760.00
Jackson	2	52	159	53.25	71.75	220.00	345.00
Jefferson	51	17	129	49.25	193.95	702.00	945.00
Lake	45	204	306	138.25	313.50	1,140.75	1,593.00
Lee	81	41	458	145.00	378.00	1,273.00	1,796.00
Liberty	2	18	95	28.75	38.75	111.50	179.00
Leon	65	156	230	112.75	330.50	1,229.75	1,673.00
Levy	8	57	229	73.50	109.75	336.75	520.00
Lafayette	1	50	70	30.25	45.50	159.25	235.00
Manatee	18	164	541	180.75	271.75	851.00	1,303.00
Monroe	.....	5	47	13.00	14.25	34.75	62.00
Madison	12	20	33	16.25	54.25	202.50	273.00
Marion	25	166	621	203.00	313.25	977.75	1,494.00
Nassau	.....	12	116	32.00	35.00	85.00	152.00
Orange	28	346	375	187.25	350.75	1,295.00	1,833.00
Osceola	18	70	330	104.50	171.50	534.00	810.00
Polk	7	422	1,013	360.50	485.25	1,538.25	2,384.00
Pasco	1	123	261	96.25	129.75	419.00	645.00
*Pinellas	2	112	419	133.25	166.75	485.00	785.00
Palm Beach	10	27	444	126.25	154.50	400.25	675.00
Putnam	5	154	304	115.75	168.00	557.25	841.00
St. Johns	7	62	405	118.50	153.25	424.25	696.00
Santa Rosa	3	17	191	52.75	65.25	169.00	287.00
Suwannee	10	35	119	41.00	77.00	256.00	374.00
Seminole	7	223	345	143.75	218.75	756.50	1,119.00
Sumter	3	66	145	53.50	78.25	256.25	388.00
St. Lucie	1	34	256	72.75	84.00	216.25	373.00
Taylor	2	11	166	44.75	53.00	131.25	229.00
Volusia	69	162	757	247.00	477.25	1,553.75	2,278.00
Walton	5	49	349	100.75	126.75	343.50	571.00
Washington	6	52	59	29.25	58.75	217.00	305.00
Wakulla	12	15	81	27.00	63.75	215.25	306.00
Totals	671	5,691	15,009	$ 5,343.25	$ 8,616.50	$28,217.25	$42,177.00

*Pinellas County incomplete.

COMPARATIVE STATEMENT OF LICENSES ISSUED IN 1913-14 AND 1914-15, SHOWING TOTAL DECREASE OF EACH KIND AND INCREASE OR DECREASE OF EACH COUNTY

COUNTIES.	Non-Resident.				State.				County.			
Alachua	34	21	...	13	280	211	...	69	684	465	...	219
Baker	...	...	...	...	22	13	...	9	50	42	...	8
Bay	...	1	1	...	56	25	...	31	129	139	10	...
Bradford	...	...	...	...	93	77	...	16	114	67	...	47
Brevard	56	62	6	...	114	117	3	...	329	281	...	48
Calhoun	2	...	...	2	36	34	...	2	86	68	...	18
Citrus	47	33	...	14	68	38	...	30	202	113	...	87
Clay	23	22	...	1	51	28	...	23	294	148	...	146
Columbia	3	1	...	2	43	52	9	...	115	133	18	...
Dade	1	3	2	...	38	44	6	...	151	227	76	...
DeSoto	10	13	3	...	257	314	57	...	561	681	120	...
Duval	...	1	1	...	712	656	...	56	853	834	...	19
Escambia	2	...	...	2	236	158	...	78	579	432	...	147
Franklin	2	...	...	2	71	77	6	...	73	53	...	30
Gadsden	4	2	...	2	97	58	...	39	246	182	...	64
Hamilton	1	...	...	1	43	28	...	15	71	32	...	39
Hernando	5	4	...	1	74	74	...	...	332	478	146	...
Hillsboro	...	3	3	...	596	664	68	...	1,134	518	384	...
Holmes	...	1	1	...	116	81	...	35	70	63	...	7
Jackson	7	2	...	5	81	52	...	29	284	159	...	125
Jefferson	58	51	...	7	41	17	...	24	273	129	...	144
Lafayette	...	1	1	...	26	50	24	...	137	70	...	67
Lake	65	45	...	20	218	204	...	14	358	306	...	52
Lee	72	81	9	...	43	41	...	2	416	438	42	...
Leon	79	65	...	14	144	156	12	...	268	230	...	38

	1913-14.	1914-15.	Increase.	Decrease.	1913-14.	1914-15.	Increase.	Decrease.	1913-14.	1914-15.	Increase.	Decrease.
Levy	11	8	...	3	58	57	...	1	281	229	...	52
Liberty	2	2	...	...	43	18	...	25	135	95	...	40
Madison	11	12	1	...	31	20	...	11	35	33	...	2
Manatee	12	18	6	...	174	164	...	10	514	541	27	...
Marion	26	25	...	1	243	166	...	77	774	621	...	153
Monroe	...	...	...	...	4	5	1	...	40	47	7	...
Nassau	...	...	...	...	18	12	...	6	162	116	...	46
Orange	20	28	8	...	297	346	49	...	395	375	...	20
Osceola	20	18	...	2	113	70	...	43	333	330	...	3
Palm Beach	18	10	...	8	28	27	...	1	268	444	176	...
Pasco	...	1	1	...	154	123	...	31	245	261	16	...
*Pinellas	8	2	...	6	166	112	...	54	303	419	116	...
Polk	8	7	...	1	441	422	...	19	960	1,013	53	...
Putnam	8	5	...	3	156	154	...	2	260	304	44	...
St. Johns	7	7	...	...	44	62	18	...	554	405	...	49
St. Lucie	9	1	...	8	38	34	...	4	302	256	...	46
Santa Rosa	2	3	1	...	14	17	3	...	179	191	12	...
Seminole	9	7	...	2	149	223	74	...	205	345	140	...
Sumter	2	3	1	...	67	66	...	1	147	145	...	2
Suwannee	13	10	...	3	44	35	...	9	109	119	10	...
Taylor	2	2	...	...	15	11	...	4	237	166	...	71
Volusia	45	69	24	...	227	162	...	65	779	757	...	22
Wakulla	19	12	...	7	33	15	...	18	82	81	...	1
Walton	5	5	...	...	94	49	...	35	472	349	...	123
Washington	4	6	2	...	61	52	...	9	85	59	...	26
Totals	732	673	...	59	6,367	5,691	...	676	15,665	15,009	...	656

*Pinellas County incomplete.

TOTAL RECEIPTS AND DISBURSEMENTS OF DEPARTMENT SINCE CREATED

RECEIPTS

Received from Hunters' Licenses, 1913-14	$45,800.25
Received from Permits issued, 1913-14	14.00
Received from Permits issued, 1914-15	31.00
Received from Hunters' Licenses, 1914 15	42,177.00
Total Receipts	$88,022.25

DISBURSEMENTS

Office expenses (statement 1913-14)	$ 3,182.26	
Wardens' fees (statement 1913-14)	9,102.25	
Judges' fees (statement 1913-14)	5,692.50	
Special Services (statement 1913-14)	589.65	
Secret Services (statement 1913-14)	71.50	
Court Costs (statement 1913-14)	39.45	
Transferred to State School Fund	21,315.65	
Office Expenses,3-1914 to 3-1915	6,530.42	
Attorney fees, 3-1914 to 3-1915	45.00	
Warden's Fees, 3-1914 to 3-1915	8,616.50	
Judges' fees, 3-1914 to 3-1915	5,343.25	
Special Services, 3-1914 to 3-1915	2,372.87	
Total Disbursements, 9-1-13 to 3-1-15		62,901.31
Balance to Credit of Department, 3-1-15		$25,120.94

RECEIPTS AND EXPENSES

RECEIPTS

Receipts, 1913-14	$45,814.25
Receipts, 1914-15	42,208.00
Total Receipts	$88,022.25

EXPENSES

Expenses, 9-1-13 to 3-1-14	$18,677.61	
Expenses, 3-1-14 to 3-1-15	22,908.04—	41,585.65
Receipts Above Actual Expenses		$46,436.60

DISBURSEMENTS IN EACH COUNTY FOR SPECIAL SERVICE

WORK FROM MARCH 1, 1914, TO MARCH 1, 1915

Alachua	To County Warden	$ 118.50
Baker	To County Warden	30.50
Bay	To County Warden	34.30
Bradford	To County Warden	86.55
Brevard	To County Warden	103.70
Citrus	To County Warden	64.90
Clay	To County Warden	3.60
Columbia	To County Warden	45.20
DeSoto	To Special Deputy Warden	51.30
Duval	To County Warden	59.65
Escambia	To County Warden	44.75
Franklin	To County Warden	3.00
Gadsden	To County Warden	17.45
Hamilton	To County and Special Deputy Warden	58.00
Hernando	To County and Special Deputy Warden	159.50
Hillsboro	To Special Deputy Warden	142.25
Holmes	To County and Special Deputy Warden	156.75
Jackson	To County and Special Deputy Warden	174.50
Jefferson	To County Warden	16.50
Lafayette	To County Warden	85.00
Lake	To County Warden	24.00
Leon	To Special Deputies	53.00
Liberty	To County and Special Deputy Wardens	62.02
Madison	To County and Special Deputy Wardens	67.50
Manatee	To County and Special Deputy Wardens	18.75
Nassau	To County and Special Deputy Wardens	20.10
Orange	To County and Special Deputy Wardens	22.00
Osceola	To County and Special Deputy Wardens	73.19
Palm Beach	To County and Special Deputy Wardens	23.30
Polk	To Special Work	8.00
Putnam	To County and Special Deputy Wardens	141.50
St. Johns	To County Warden	48.00
St. Lucie	To County Warden	34.95
Santa Rosa	To County Warden	3.75
Sumter	To County Warden	3.00
Suwannee	To County and Special Deputy Warden	61.35
Wakulla	To County and Special Deputy Warden	178.25
Walton	To County Warden	56.00
Total		$2,372.87

On page 31 of my report for last year will be seen my reference then to the probable receipts for the season 1914-15. Of course, at the time of making this report, the general unsettled conditions of the entire country was not dreamed of. By reason of the fact that interest in the enforcement of the Game and Fish Laws increased so very much after the first season I am inclined to think that the deficiency in the receipts of 1914-15, compared with the receipts for 1913-14, should be attributed mainly to the financial conditions of the country, which has affected each and every commercial industry in the world. By examination of my records I find that in the sections where the turpentine, sawmill and phosphate men reside that there has been a considerable decrease in the sale of licenses for the season of 1914-15 compared with the sales of 1913-14. It is known, of course, that these three industries, which means so much to Florida in a financial way, have been and yet remain in a very serious condition. Again, I find that a large number of the colored farmers and wage earners in all sections of the State that purchased licenses for 1913-14 failed to purchase for 1914-15. Another reason for failing to sell as many licenses this season as last is on account of the fact that no licenses were sold this season only when an application was made under oath, which section of the law was not carried out last season, for reasons given in my first report. This is very inconvenient to persons buying licenses, and is the cause of a great number not buying at all, and violating the Game Laws. It is evident that an oath is necessary to the applications of persons purchasing State and Non-resident Licenses and for these applicants an oath will work no hardships, but if the oath is omitted from the applicants who purchase County Licenses it will mean a great increase in the sale of County Licenses.

Another reason of the decreasing sale of Hunters' Licenses is from the fact that before last hunting season opened I had not distributed the laws governing the De-

partment, giving Section 13 of Chapter 6534, which gives a person the right to hunt within the voting precinct, ward or beat in which he actually resides without obtaining a Hunters' License. From the fact that the laws were not distributed before last season a large number of licenses were sold to persons who did not know of this provision. This provision has caused the sale of less County Licenses than would have been otherwise, and it's well to say it has caused more confusion and violation of the Game Laws than it has done good. It is nothing more or less than an invitation to continuous violations. No person desiring to hunt at all will object to paying one dollor for a County License, and Section 13 of Chapter 6534 should be amended, striking out the provision allowing one to hunt in his voting precinct without obtaining a license.

"BIRDS WILL PRESERVE HEALTH."

By H. W. Henshaw, Department of Agriculture, Washington, D. C.

The value of birds to the farmer is plain enough, but we do not usually think of birds as having any direct relation to the public health. To prove that they do, however, it is only necessary to state that 500 mosquitoes have been found in the stomach of a single night-hawk; that in a kildee's stomach hundreds of the larvae of the salt-marsh mosquitoes have been found, and that many shore birds greedily devour mosquito larvae. As mosquitoes are known to carry the germs of such serious diseases as typhoid, malaria and dengue fever, it is evident that by destroying such germs the birds are conferring a distinct benefit on man. It may be added that not infrequently ticks are eaten by birds, and that the tick, which is responsible for the spread of Texas fever among cattle, has been frequently found in the stomach of the bobwhite.

In considering the many kinds of birds in the United States from the practical side, they may not inaptly be called a police force of the air, the chief duty of which is to restrain within bounds the hordes of insects that, if unchecked, would devour every green thing. To accomplish this task successfully the members of the force must be variously equipped. As the bulk of insects spend more or less time on the ground, we find more birds are fitted for terrestrial service than for ably aided in its search for insects by sparrow, is chiefly terrestrial. It is ably aided in its search for insects by the thrushes, wrens, certain of the warblers, and many other birds. So many insects burrow into the trees that a highly specialized class of birds, the wood peckers, have been developed to dig them out. The bills, tongues, feet, and even tails, have been cunninguy adapted to this end. The bark of trees also forms a favorite shelter for numerous insects, and

BULL BAT

behold the wrens, nuthatches, warblers, creepers, with sharpest of eyes and slenderest of bills. The air is full of flying insects, and to take care of these are the swallows, swifts and nighthawks, whose wings and bodies are so shaped as to endow them with the speed and agility necessary to follow all the turns and windings of their nimble insect prey. The whipporwills attend to the night-flying insects when most birds are asleep, while the hawks by day and the owls by night supplement the work of other birds, and have a special function of their own—the destruction of noxious rodents.

Notwithstanding the fact that the acreage under cultivation in the United States is larger than ever before, and that the crops are greater, the cost of foodstuffs continually mounts upward. Meanwhile the destruction of farm and orchard crops by insects and by rodents amounts to many million each year. If any part of this loss can be prevented it will be so much clear gain. Since birds perform such invaluable service, every effort should be made to protect them. This can be done by furnishing nesting boxes for certain species to nest in, as swallows, martins, wrens, woodpeckers, great-crested fly-catchers and others; by planting berry-bearing shrubs about the farm and orchard as food for the birds in winter, and by the establishment of bird sanctuaries where birds will be reasonably safe from their natural enemies and be permitted to live and breed in absolute security as far as man is concerned.

Last but not least important may be mentioned the element of safety from cats. Friendly overtures to birds from householders, who regard tabby as a necessary member of the family, are not likely to be successful, or if so the experiment is apt to end in the death of the confiding birds. Birds and cats do not live in the same neighborhood."

Can the people of the State imagine what the insects

would do within a few days if all of the birds of the State were by some epidemic among them taken from existence. Epidemics of diseases among the masses caused from infections of insects would be uncontrollable.

FINANCIAL CONDITIONS HINDERED SALE OF HUNTERS' LICENSES.

To support my statement that general financial conditions have hindered the sale of Hunters' Licenses, I give below letters from wholesale hardware companies showing there has been a large decrease in the sale of hunters' supplies of all kinds:

"Tampa, Fla., February 27, 1915.

Mr. E. Z. Jones,
Tallahassee, Fla.

Dear Sir:—Answering yours of the 22nd, beg to advise that our business in ammunition and hunting supplies decreased about 20 per cent in 1914.

Yours very truly,

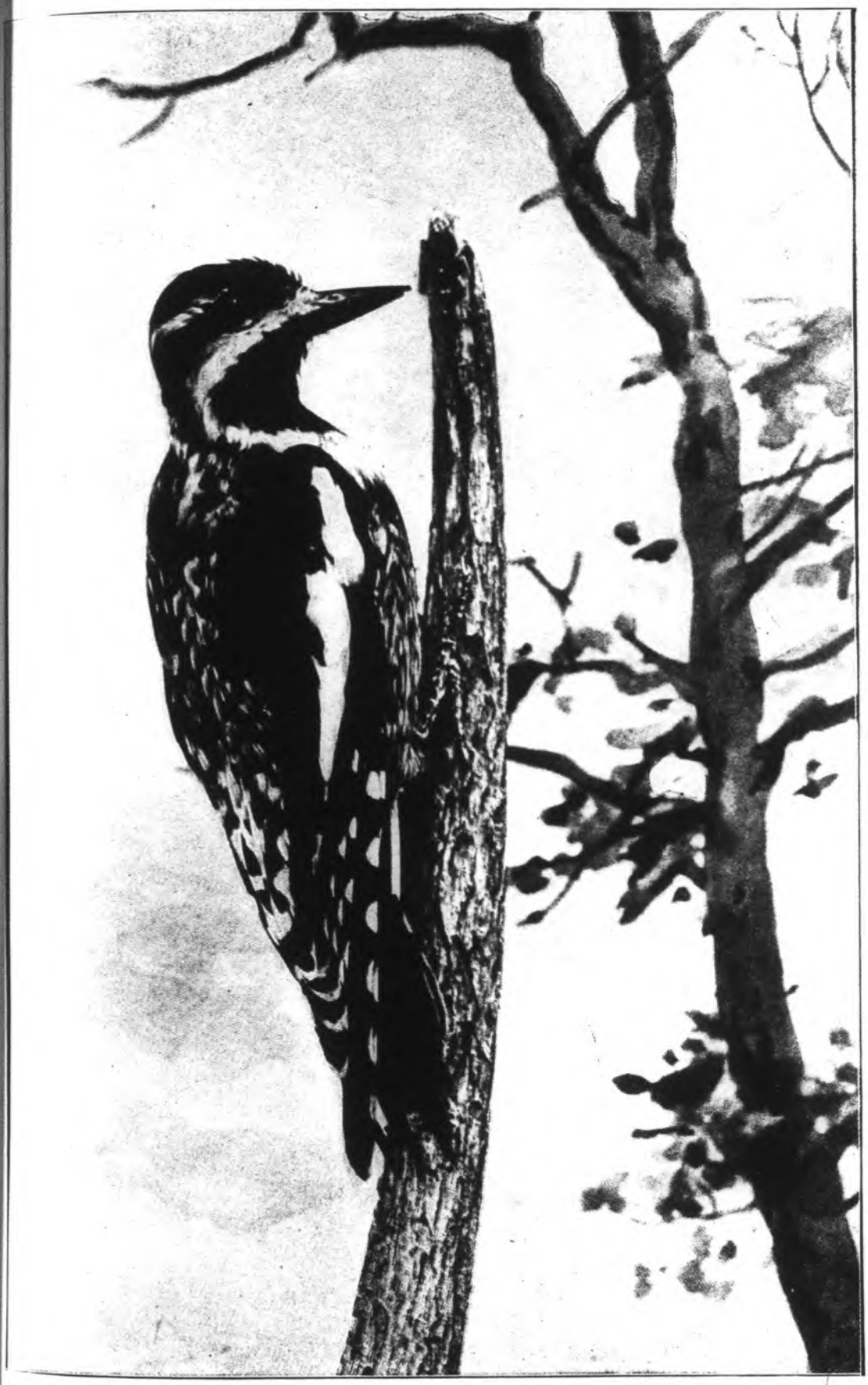
TAMPA HARDWARE CO.,
W. C. Thomas,
Treas. and Gen. Mgr."

"Jacksonville, Fla., February 23, 1915.

Mr. E. Z. Jones, Commissioner,
Tallahassee, Fla.

Dear Sir:—We have your favor of the 22nd, and we are very glad, indeed, to give you the information you ask for, as far as we can.

We find there has been a decrease of 22 per cent in the sale of ammunition by us during the year 1914-15 from that of the year 1913-14. This includes both wholesale and retail.



THE WOODPECKER

One reason for the decline, as far as we can figure it out, is that there has not been as much shooting done all over the State. Then, again, a great many people have not had the money or credit to buy ammunition. We had a good many orders on file for future shipment taken during last spring and summer for fall shipment, and when the time rolled around for the goods to be shipped, we found we could not ship them on account of the financial condition of the people who ordered the goods. This has curtailed some of the sales.

There has also been a decline in the sale of firearms. We imagine a good deal of this has been brought about by the depressed condition over the country. Neither do we think there have been as many sportsmen visiting the State this year as during previous seasons.

If you are getting up statistics on this matter we would like to have a copy of the book or pamphlet, whatever you do get out, when you have it completed.

Yours truly,

THE S. B. HUBBARD CO.,
Frank S. Gray, President."

LESS NON-RESIDENT LICENSES SOLD.

It is seen that there has also been a decrease in the sale of Non-resident Licenses as compared with the sale of 1913-14, though nearly as many non-residents have hunted the past season as hunted the season of 1913-14. They have taken the risk of buying Resident State Licenses. I have prosecuted several for obtaining these licenses under a misstatement. One County Judge writes as follows:

"I find that non-residents have purchased State Licenses in Duval County and hunted in this and other counties; also that advantage has been taken of exemption of licenses for hunting in own precinct, ward or beat, and that parties have hunted all over the State without proper

licenses. The law should be amended fixing a charge of one hundred dollars for a non-resident to buy a license for entire State. The exemption of precinct clause should be struck out."

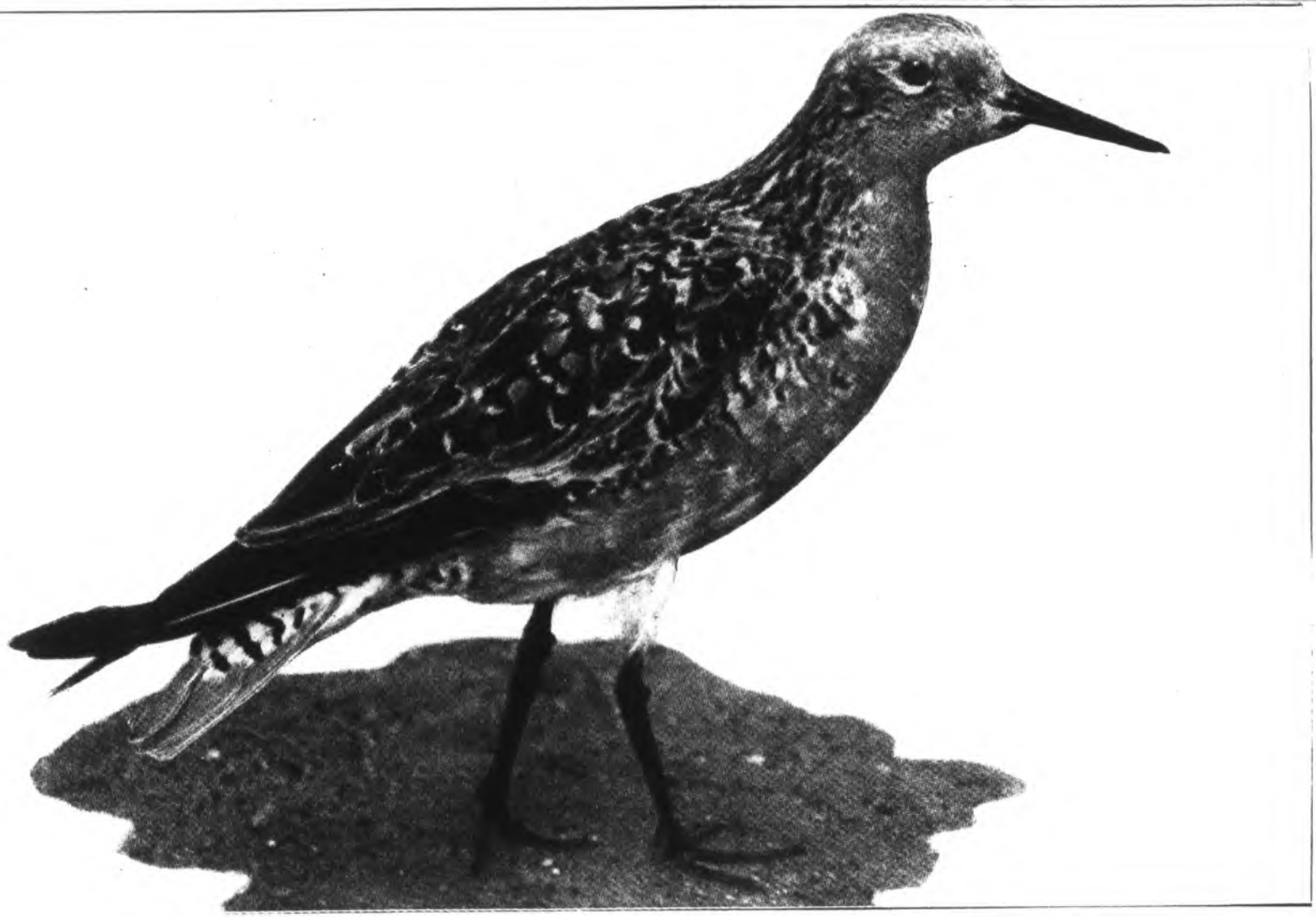
I have no doubt that practically every County Judge of the State, if requested, would make such a statement as the one set forth above. This condition existed last year and will continue until peace officers and county officials are more diligent in the enforcement of the laws.

LESS HUNTING THAN WHEN GAME LAWS WENT INTO EFFECT.

I can secure letters from wholesale hardware concerns which will show that the sales for ammunition decreased since the game laws went into effect about 40 per cent, and yet some people will tell you there is more hunting going on since the game laws were enacted than before.

MONEY SPENT FOR CLERICAL SERVICES.

Section 6 of Chapter 6535 only provides me with two dollars per day for a clerk. I could not get a competent clerk at this price when I assumed the duties of the office September 1, 1913. I, therefore, paid a clerk one hundred dollars per month until September 1, 1914, amounting to twelve hundred dollars for the year. I charged two dollars per day for each working day to the State for clerical services and paid the deficiency myself, which was five hundred and seventy-six dollars from my salary. I have had employed since January 12, 1915, a clerk at one hundred dollars per month, paying him two dollars per day allowed by the State and paying the deficiency myself. It cannot be expected of me to have this to do, and I will present a bill to the next Legislature for my relief for the above amount. It has been necessary for me to have



THE PLOVER

this clearical service rendered, and I feel that the State should pay for it. I am also in hopes that the next Legislature will provide for a competent salary for a stenographer and one clerk or more if needed. This being a new department it cannot be said that the work can lay in wait to be done, as it has waited now for ages, and needs to be done now.

DISPOSITION OF MONEY DERIVED FROM SALE OF HUNTERS' LICENSES.

No person realizes the need of an education more than the writer. It has been necessary from time to time for me to realize with great regret the effect of limited education. The statistics show that there is a need of more and better rural schools in Florida. The per cent of illiterates in the rural districts of Florida is 6.4 per cent, and 1.01 per cent in the city and villages. Florida has 77,816 illiterates, and 63,130 of them live on the farm, and yet the cities and towns of the State are dependent upon the farmers for their support. There are 33,197 boys and men, and 29,933 girls and women on the farms in this State who can neither read nor write. These figures are about the average per cent that has been existing for many years, and it is the belief that until sufficient schools are erected in the rural districts that it will not decrease. These statistics show that our school fund needs all the assistance it can possibly get, and while, of course, it was not the purpose or intention of getting revenue for any fund from this Department it is well to say that with the needed increase of educational facilities of the State that such revenue derived from this Department after the primary purpose of the laws are carried out cannot be placed to a better cause than education.

SHELL FISH AND GAME AND FISH DEPARTMENTS.

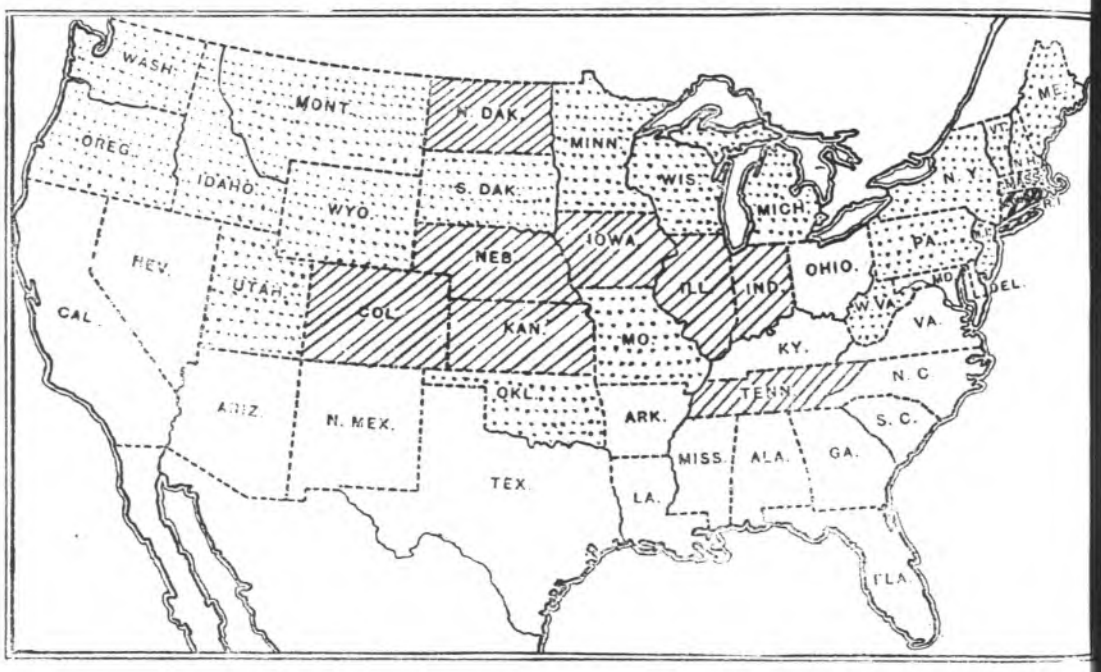
In my report submitted to you June 1, 1914, I recommended, among other things, that the Department of Shell Fish Commission be placed under the supervision and jointly with the Game and Fish Department. I yet maintain the opinion that it is not consistent nor practicable to have two separate Departments. The present value of the Shell Fish Industry to the State as an asset can hardly be estimated. The Shell Fish Commissioner has demonstrated this by already increasing and laying plans for increasing the supply of Shell Fish. It is needless to say that in an industry where such a large volume of work is necessary, as is necessary in the proper culture of Shell Fish, that in the coastal waters there will be numerous employees on duty practically the year round. These employees can render valuable services to the Game and Fish Department in the enforcement of the Game and Fish Laws, especially the Fish Laws. The services of additional men are needed by this Department. It can be had by the consolidation of these two Departments without additional expenses on either Department. It is my opinion that it will be two to five years before the Shell Fish Industry has reached a basis whereby it can, if the purpose of the Department is carried out, sustain itself. On the other hand, if connected with this Department, moneys than can be obtained from the fishing industry, as I have set forth, and that received from the Shell Fish Industry will be adequate for the purpose of placing the Shell Fish Industry and the Fishing Industry in position to meet the purposes of the laws creating both Departments. In contending that a license fee should be placed on each fisherman I am maintaining the position I have held and supported for ten years, and contrary to conditions before this Department was created, 90 per cent of the fishermen now support me. From the fact that I have done

THE BLACK VULTURE (BUZZARD)

considerable work in the direction of creating among the fishermen a desire by them to pay a license in order to get protection and have spent considerable money for which, under the present provisions, I cannot be reimbursed, I have been encouraged in such by the thought that I would have the pleasure in executing such provision if brought about, which I feel will be, upon the basis of my work. Notwithstanding my desire, I know, as stated before, that the Shell Fish Industry has, comparatively speaking, just been founded, and if the Commissioner of that Department is properly aided now it is worthy of the supervision of the Salt Water Fish Industry, and if it does not seem practicable to consolidate the Shell Fish Commission and the Game and Fish Department it is not at all unwise for the Shell Fish Department to supervise the enforcement of laws relating to Salt Water Fish and to receive and expend in propogation, culture and protection of Shell Fish and Salt Water Fish such moneys derived from the two as is necessary to carry out the primary purposes of the two Departments. In either event, provisions should be made whereby the two Commissioners can better carry out the requirements of their offices.

PROVINCES REQUIRING HUNTING LICENSES. INFORMATION REGARDING HUNTING IN STATES OF THE UNION.

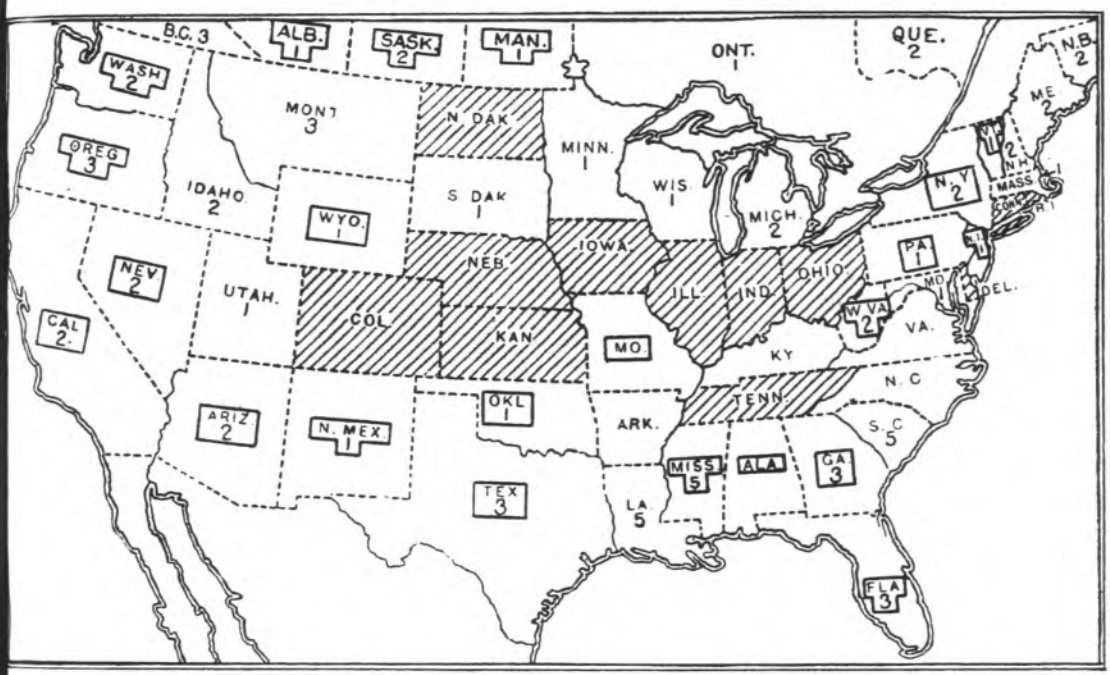
Below I show all of the States of the Union:



The shaded area shows the States in which hunting deer with dogs is absolutely prohibited by law. In ten States (those ruled) all deer hunting in any manner or for any purpose is absolutely prohibited. In twenty States (those dotted) and in a few counties in North Carolina hunting deer with dogs is prohibited at all times. ——— Carolina, in 1907, prohibited hounding of deer except wounded deer, but in 1911 permitted hunters to use one dog in trailing deer. Two States, Delaware and Ohio, have no deer. The first law prohibiting hunting deer with dogs was a local statute passed in Barnstable County, Massachusetts, in 1802. Laws prohibiting hunting deer with dogs through-

out the State were passed in New York in 1869 and 1897; in Indiana, 1879; in Maine, 1883; in Michigan, 1887; in Washington, 1890.

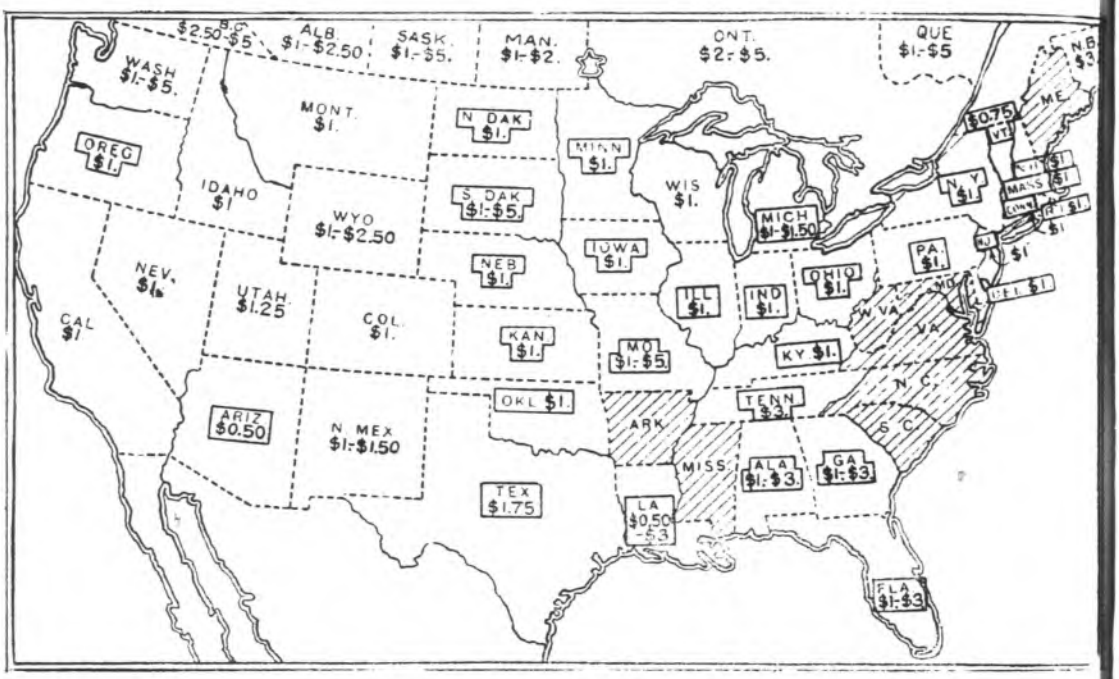
Below the States are given again:



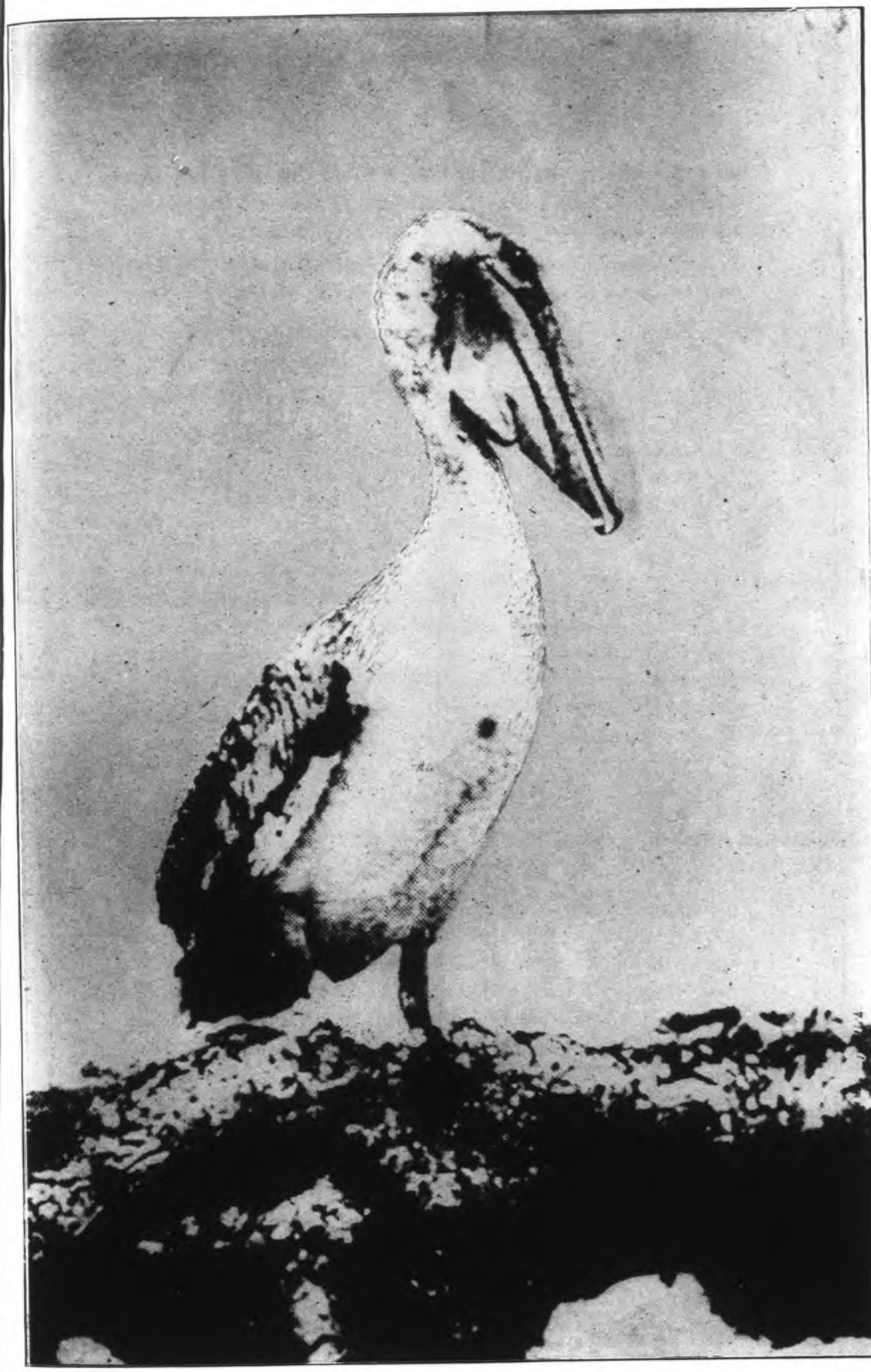
The shaded area show the States in which there is no deer hunting. Enclosed names indicate the States which protect does at all seasonse. Figures indicate the number of deer allowed each hunter during a season. In the eastern half of Maine and southern half of New Hampshire the limit is one deer in a season; in Alabama, Mississippi and Missouri the limit is one a day, and in Louisiana two a day. The limit in North Carolina is provided in a few counties only; no limit is provided in Arkansas, Kentucky or Virginia. Laws of Colorado and New Mexico require that "deer killed must have horns;" New Jersey, that "the horns must be visible above the hair;" Pennsylvania, that "the horns must be two inches above the hair;" New York

and Vermont, that "the horns must be at least three inches long;" and West Virginia, that "the horns must be four inches long."

Resident hunting licenses are now required in forty States, eight Canadian Provinces and in Newfoundland.



In New Brunswick, Ontario and Quebec these licenses are required only for hunting big game, and in Tennessee only for hunting on land without written permission from the owner. Nova Scotia and Newfoundland require resident licenses for hunting caribou only. In Michigan, Minnesota, New Mexico and South Dakota separate resident licenses are required for hunting big game. In thirty States, following the French method, landowners are permitted to hunt on their own property without licenses. These States and the price charged for the licenses are indicated on the map by black lines enclosing their names. In ten States, mainly in the West, following the English method, everyone who hunts is required to secure a li-



6—Game. THE PELICAN

cense. In Connecticut, Delware, New Jersey, New York, Oklahoma, Pennsylvania and Rhode Island, an additional fee, varying from ten to twenty-five cents, is charged by an officer to issue the license.

PUMP AND AUTOMATIC GUNS.

Within the past few years the pump and automatic guns have come into almost full play. Thousands upon thousands of birds that are never seen by the person shooting them are being killed each year by these infernal guns. They are an invitation to any person who uses them to exceed the limit in each day's hunt by several in number, and thousands in a season. Of all the implements used in hunting, which should not be allowed in this State, the pump and automatic guns should be num bered as the most dangerous and expensive. Of course, when legislation is offered doing away with the use of these guns, the manufacturers will put up a howl through their representatives and spend thousands of dollars to defeat it. They have no regard for the waste their guns create upon us as a loss. Their only regard is to *sell the guns.*

WORK OF AUDUBON SOCIETIES.

The work of the Audubon Societies to the country can hardly be estimated. For several years they have been energetic and spending money in untold amounts for the protection of birds, and that all laws pertaining to the protection of birds have been based upon the results of their work can hardly be questioned. In this report may be found an article, "Florida Bird Life," by Dr. T. Gilbert Pearson, Secretary to the National Association of Audubon Societies, 1974 Broadway, New York City. The members of the Audubon Societies have rendered me great

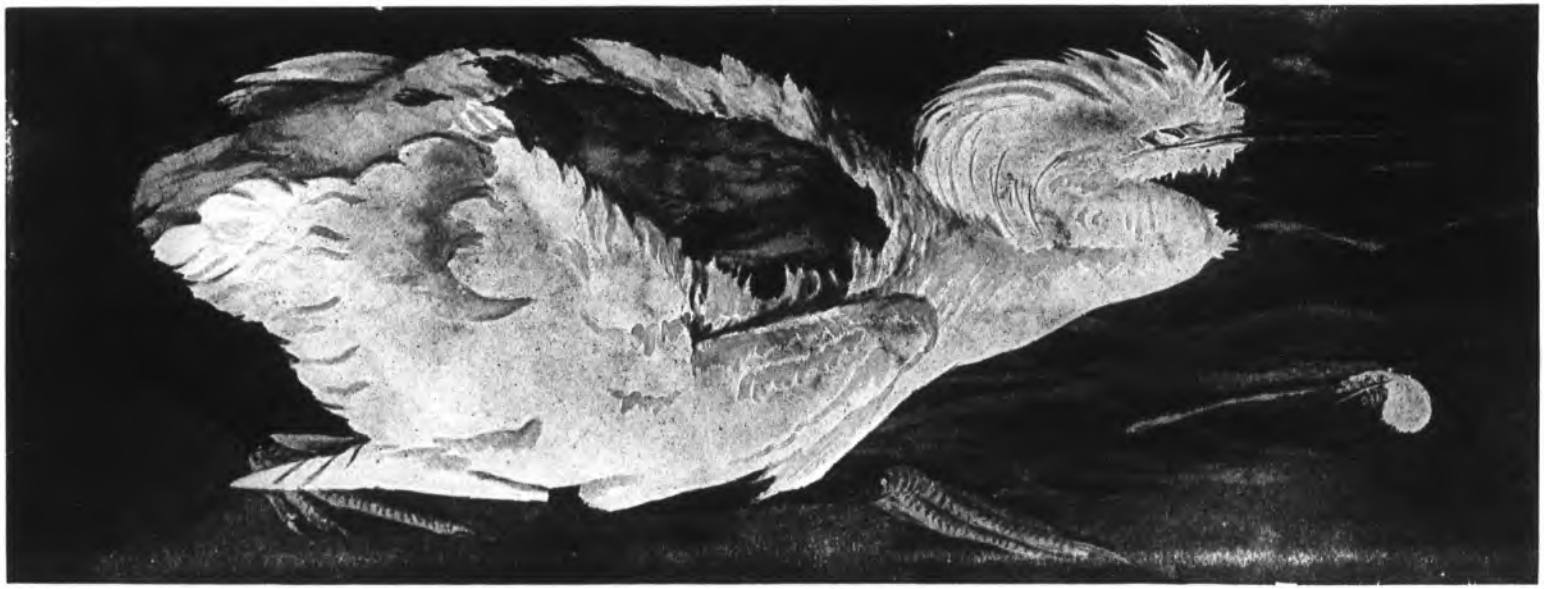
assistance in this State in the enforcement of the laws pertaining to birds, which should be appreciated by the citizens of the State.

I desire to thank the different newspaper editors of the State who have given any publicity to the work of this Department. I also thank the county officials for the services they have rendered.

I again thank you for the co-operation you have given me in the interest of this Department, which has been of considerable assistance to me in discharging my duties of office. I will continue to appreciate the co-operation of all who are interested in the success of this Department and the enforcement of the game and fish laws.

Yours very truly,

E. Z. JONES,
State Game and Fish Commissioner.



THE MURDERED MOTHER-BIRD (THE WHITE HERON, SLAUGHTERED BY PLUME-HUNTERS)

VALUE OF BIRDS.

[From Pascagoula (Miss.) Chronicle, Feb. 27, 1915.]

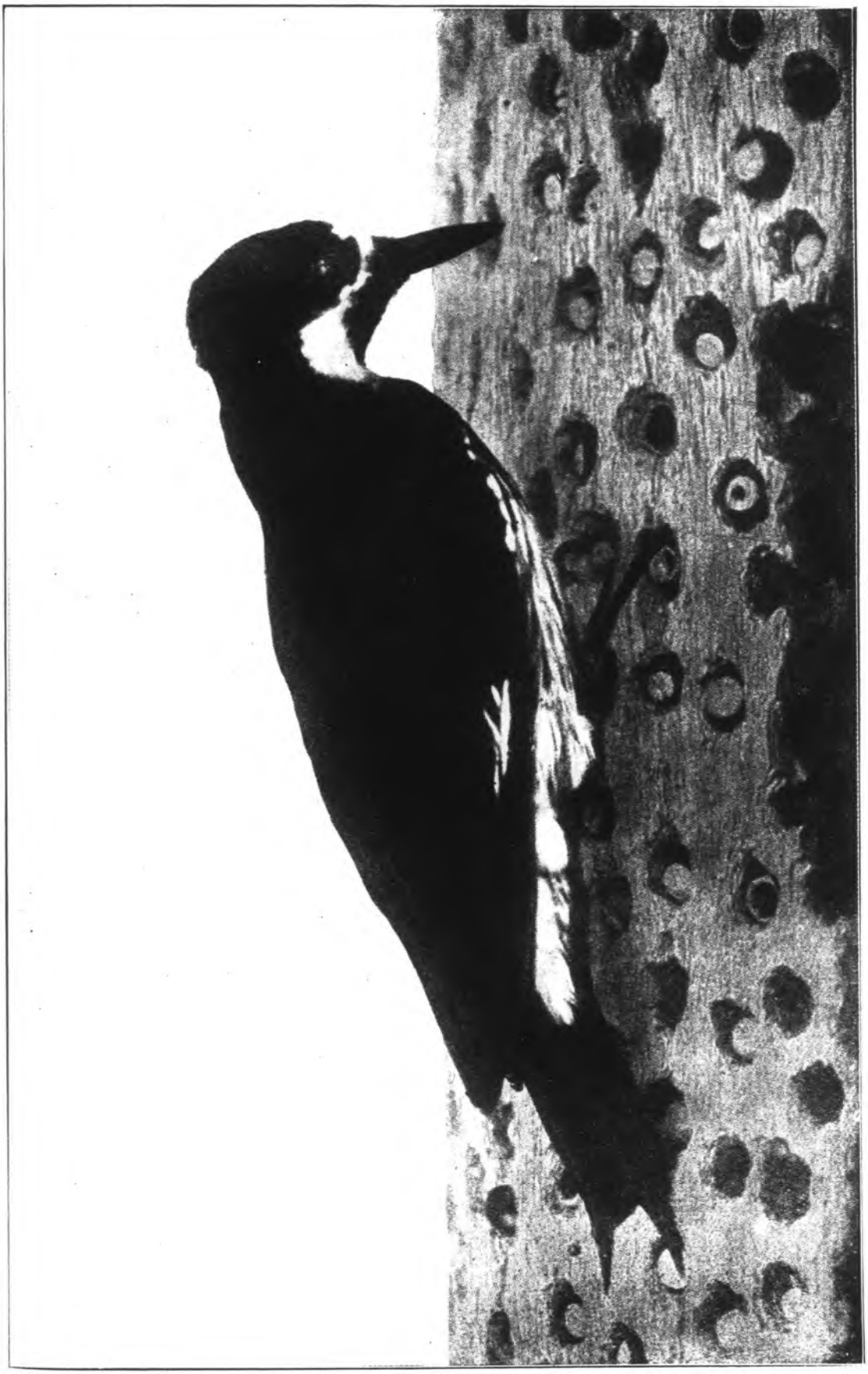
Probably there is no one subject upon which man needs to be constantly reminded so much as the value of bird life to his orchards and gardens.

Mississippi has enacted liberal laws looking towards the preservation of our birds, but such laws are valueless without the intelligent co-operation of those whom they are intended to help.

Birds are insect devourers, and were it not for their aid insects would, within a few years, destroy the last vestige of vegetable life on this planet and animal life would perish for want of food. In 1877 the farmers of Nebraska destroyed with poisoned grain the red-winged blackbirds, as well as numberless prairie chickens, quail, etc., because they ate the corn. But the fall of 1877 brought its revenge, for in that year appeared vast hordes of locust, and as there were no blackbirds or other insect eating birds Nebraska mourned at the desolation of her fields. Some years ago the farmers of Hungary took active measures to rid their land of the sparrow, but within five years clamored to have the bird restored to them, as the land was overrun with insects. The farmers of New Zealand were, when they first began to break up the soil for cultivation, beset by a caterpillar that came in such armies that herds of sheep were hurriedly gathered to trample them into the earth, and horse rollers were brought up hurriedly, like engines to a fire, and drawn backward and forward over the crawling masses until the cylinders stuck fast in a mire of squashed insects. Huge ditches were dug in the attempt to stop the invaders' progress. The effort was as futile as that of a child who builds a bank of sand by the sea, thinking it will stem the oncoming tide. Even railway trains were brought to a standstill, the wheels of the engines being unable to grip

the rails, owing to the hordes of caterpillars which were crossing the line. The evil was abated by importing into the country the common house sparrow, which soon made an end of the caterpillars. Again, New Zealand was threatened with destruction by the Scotch thistle, which had been introduced into that land, but the poor despised sparrow took to feeding on it by the tens and hundreds of thousands and the weed was soon conquered.

Many more instances could be given as to the value of bird life to our gardens and farms. Someone has calculated that one pair of gypsy moths, if unchecked, would in a single season produce enough young to eat up all the foliage in the United States.



THE SAPSUCKER

THIS WAS REAL SPORT.

[From Florida Times-Union, March 11, 1915.]

While Florida does not brag very loudly of the big game at large in the State, it is interesting to note that a huge panther was killed near Imokalee and brought to Fort Myers a few days ago. All kinds of sport can be had in the State if the sportsmen are after it, and the huge representative of the cat family was brought down by a hunter and called forth the admiration of crowds at Fort Myers later. The panther measured *over seven feet* in length and was treed by dogs and afterwards shot.

FLORIDA BIRD-LIFE.

By T. Gilbert Pearson, Secretary, the National Association Audubon Societies.

Florida is rich in its wild bird-life. Within the borders of the State, or the waters that immediately surround it, there have been recorded in recent years about 375 species of birds. Some of these, for example, the Mocking Bird, Red-winged Black Bird and Quail are represented by millions of individuals, while others, for example, the Mississippi Kite, Mangrove Cuckoo and Key West Dove, have been found only in rare instances. Enormous inroads have been made on the wild bird population as a result of the gathering of feathers for the millinery trade, in fact, no State has suffered more from this cause. There was a time, before the laws in the Northern States prohibited the sale of feathers, that a great many shore-birds and other beautiful long-winged flyers, were killed. Men fitted out vessels with ammunition and provisions, sufficient to last for several weeks, and cruised among the islands of the Gulf Coast and Florida Keys, and for months at a time engaged daily in the killing and skinning of birds for the millinery trade.

For years hundreds of thousands of Florida's feathered population were thus destroyed and their plumes sent North to decorate the hats of fashionable women. Among the shore-birds killed were Willets, Wilson's Plovers, Sandpipers and Curlews. In fact, no bird found on the beaches were immune from the shotguns of these feather-hunters.

The well-known story of the destruction of Florida's Egrets is one of the blackest spots on the history of any State in the American Union.

As a boy in Alachua County, back in 1886, I was a witness of the raiding of a colony of these birds, which was

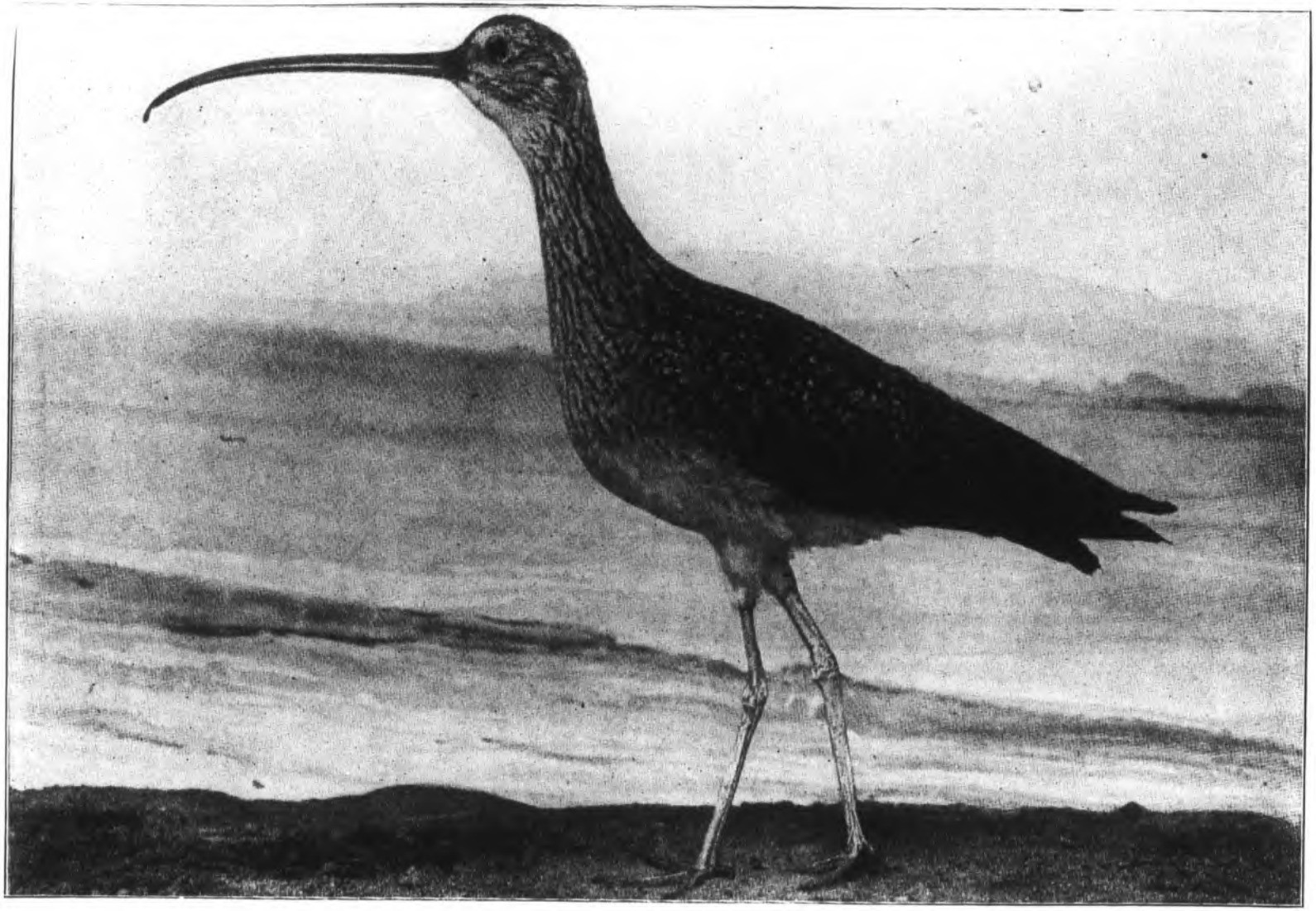
enough to bring tears to the eyes of anyone who entertains the slightest sentiments for wild creatures. As the Egret contains good plumes only in the nesting season, it is, of course, then that they are killed. I saw the dead birds festering in the sunlight and the young birds rotting in the nests, where they had died of starvation.

Many good people have protested against this, and the Audubon Society labored for years before it was possible to get a law through the Florida Legislature prohibiting the killing of non-game birds. A restrictive measure was passed in 1901, but this, however, proved to be of little value, for there was no State Warden force to see that the laws were observed. The Audubon Society began to employ wardens to guard some of the more important colonies of wild birds.

On July 8, 1905, Guy Bradley, a paid agent of the Audubon Society, guarding Cuthbert Rookery, near Cape Sable, was shot and killed by a bird hunter, and Cuthbert Rookery left unguarded has been practically wiped out, so far as its plume-birds are concerned. In recognition of Bradley's services the Audubon Society purchased a home for his wife and children in Key West.

On March 14, 1903, President Roosevelt declared Pelican Island, on the Indian River, a bird reservation, but did this with the understanding that the Audubon Society would hire a man to protect it. The Society went farther and purchased a boat for the warden's use in patroling the island. This launch and the warden are both in service today.

Later the writer cruised the Gulf Coast of Florida looking up the colonies of birds on government territory. Five of these were made Federal Reservations. To guard one of them, in Charlotte Harbor, we employed a man named McCloud, who, in a few weeks, was killed and his body wedged under the seat of the Audubon patrol boat, a hole chopped in the bottom of the launch, and with the aid



THE SANDPIPER

of sandbags was sunk, the water, it was evidently hoped, would reveal no tales. Florida today has ten Federal Bird Reservations and a number of Audubon Sanctuaries.

Despite these discouragements the Audubon workers kept at their task. Year after year bills were drafted to establish a State Game Comission, thousands of letters were written, and the writer, as well as other Audubon representatives, visited the Legislature. The Audubon bill protecting Robins in this Staate was passed in 1913, and after a prolonged campaign, in which interested people outside of the State were particularly active, the present Game Commission was established in 1913.

The State Game Commissioner of Florida does not have an easy task. With inadequate funds and a relatively small force of officers he is attempting to protect the wild birds and animals of a large State, many sections of which are thinly populated, and in which there is not a very widespread pronounced desire to see the birds protected. He is making a noble fight against heavy odds, and deserves the utmost sympathy and support of all right-thinking people in Florida.

The National Association has continued its efforts and has spent many thousands of dollars in the State guarding colonies of birds, working for effective legislation and endeavoring to cultivate public sentiment. Many of these things it will continue to do. Its paid agents will, this summer, protect the most important of the known colonies of Egrets, Spoonbills, Ibis and other large and beautiful birds, in order that these may be preserved to the Commonwealth.

Several thousands of school children are each year organized into bird-study classes, and are given specific instruction in the beauty of bird-study and of the value of birds to the agricultural and horticultural interests of the State. Wild bird-life is a vast national resource. A large percentage of the species found in Florida are in-

sectivorous in their habits and perform a great work in keeping down the numbers of destructive insects. But for the birds the loss through these insect-pests would be enormous, and the State which does not protect its wild birds indeed gives hostages to fortune.

A LIST OF THE BIRDS OF FLORIDA.

1. Horned Grebe. *Colymbus auritus.*
2. St. Domingo Grebe. *Podilymbus podiceps.*
3. Loon. *Gavia immer.*
4. Red-throated Loon. *Gavia stellata.*
5. Parasitic Jaeger. *Stercorarius parasiticus.*
6. Long-tailed Jaeger. *Stercorarius longicaudus.*
7. Great Black-backed Gull. *Larus marinus.*
8. American Herring Gull. *Larus argentatus.*
9. Ring-billed Gull. *Larus delawarenses.*
10. Laughing Gull. *Larus atricilla.*
11. Bonaparte's Gull. *Larus philadelphia.*
12. Gull-Billed Tern. *Gelochelidon nilotica.*
13. Caspian Tern. *Sterna caspia.*
14. Roya Tern. *Sterna maxima.*
15. Cabot's Tern. *Sterna sandvicensis acuflavida.*
16. Forster's Tern. *Sterna forsteri.*
17. Common Tern. *Sterna hirundo.*
18. Roseate Tern. *Sterna dougalli.*
19. Least Tern. *Sterna antillarum.*
20. Sooty Tern. *Sterna fuscata.*
21. Bridled Tern. *Sterna anae theta.*
22. Black Tern. *Hydrochelidon nigra surinamensis.*
23. Noddy Tern. *Anous stolidus.*
24. Black Skimmer. *Rynchops nigra.*
25. Wandering Albatross. *Diomedea exulans.*
26. Greater Shearwater. *Puffinus gravis.*
27. Audubon's Shearwater. *Puffinus Cherminieri.*
28. Black-capped Petrel. *Aestrelata hasitata.*
29. Wilson's Petrel. *Oceanites oceanicus.*

30. White-bellied Petrel. *Frigetta grallaria.*
31. Yellow-billed Tropic Bird. *Phaethon americanus.*
32. Blue-faced Booby. *Sula cyanops.*
33. Booby. *Sula sula.*
34. Red-footed Booby. *Sula piscator.*
35. Gannet. *Sula bassana.*
36. Water Turkey. *Anhinga anhinga.*
37. Double-crested Cormorant. *Phalacrocorax auritus auritus.*
38. Florida Cormorant. *Phalacrocorax dilophus floridanus.*
39. American White Pelican. *Pelecanus erythrorhychos.*
40. Brown Pelican. *Pelecanus occidentalis.*
41. Man-o'-War-bird. *Fregata aquila.*
42. American Merganser. *Merganser americanus.*
43. Red-breasted Merganser. *Merganser serrator.*
44. Hooded Merganser. *Lophodytes cucullatus.*
45. Mallard Duck. *Anas platyrhynchos.*
46. Black Duck. *Anas rubripes.*
47. Florida Black Duck. *Anas fulcigula.*
48. Gadwall Duck. *Chaulelasmus streperus.*
49. American Widgeon. *Mareca americana.*
50. Green-winged Teal. *Nettion carolinense.*
51. Blue-winged Teal. *Querquedula discors.*
52. Cinnamon Teal. *Marila cyanoptera.*
53. Shoveller Duck. *Spatula clypeata.*
54. Pintailed Duck. *Dafila acuta.*
55. Wood Duck. *Aix sponsa.*
56. Red-headed Duck. *Marila americana.*
57. Canvas-backed Duck. *Marila vallisneria.*
58. American Scaup Duck. *Marila marila.*
59. Lesser Scaup Duck. *Marila affinis.*
60. Ring-necked Duck. *Marila collaris.*
61. American Golden-eye Duck. *Clangula clangula.*
62. Buffle-head. *Charitonetta albeola.*
63. Old Squaw. *Harelda hyemalis.*
64. Harlequin Duck. *Histrionicus histrionicus.*

65. White-winged Scoter. *Oidemia Deglandi.*
66. Surf Scoter. *Oidemia perspicillata.*
67. Ruddy Duck. *Erismatura jamaicensis.*
68. Greater Snow Goose. *Chen hyperborea nivalis.*
69. Blue Goose. *Chen caerulescens.*
70. Canada Goose. *Branta canadensis.*
71. Brant. *Branta bernicla .*
72. Whistling Swan. *Olor columbianus.*
73. American Flamingo. *Phoenicopterus ruber.*
74. Roseate Spoonbill. *Ajaja ajaja.*
75. White Ibis. *Guara alba.*
76. White-faced Glossy Ibis. *Plegadis guarauna.*
77. Glossy Ibis. *Plegadis autumnalis.*
78. Wood Ibis. *Mycteria americana.*
79. American Bittern. *Botaurus lentiginosus.*
80. Least Bittern. *Ixobrychus exilis.*
81. Cory's Least Bittern. *Ixobrychus neoxena.*
82. Great White Heron. *Ardea occidentalis.*
83. Great Blue Heron. *Ardea herodias herodias.*
84. Ward's Heron. *Ardea herodias wardi.*
85. American Egret. *Ardea egretta.*
86. Snowy Heron. *Egretta candidissima.*
87. Reddish Egret. *Dichromanassa rufescens.*
88. Louisiana Heron. *Hydronassa tricolor.*
89. Little Blue Heron. *Florida caerulea.*
90. Green Heron. *Butorides virescens.*
91. Black-crowned Night Heron. *Nycticorax nycticorax naevius.*
92. Yellow-crowned Night Heron. *Nyctanassa violacea.*
93. Whooping Crane. *Grus americana.*
94. Sandhill Crane. *Grus mexicana.*
95. Limpkin. *Aramus vociferus.*
96. King Rail. *Rallus elegans.*
97. Clapper Rail. *Rallus crepitans crepitans.*
98. Scott's Rail. *Rallus crepitans scotti.*
99. Virginia Rail. *Rallus virginianus.*
100. Sora. *Porzana carolina.*

101. Yellow Rail. *Coturnicops noveboracensis.*
102. Black Rail. *Creciscus jamaicensis.*
103. Purple Gallinule. *Ionornis martinica.*
104. Florida Gallinule. *Gallinula galeata.*
105. American Coot. *Fulica americana.*
106. Red Phalarope. *Phalaropus fulicarius.*
107. American Avocet. *Recurvirostra avericana.*
108. Black-necked Stilt. *Himantopus mexicanus.*
109. American Woodcock. *Philohela minor.*
110. Wilson's Snipe. *Gallinago delicata.*
111. Dowitcher. *Macrorhamphus griseus.*
112. Long-billed Dowitcher. *Macrorhamphus griseus scolopaceus.*
113. Stilt Sandpiper. *Micropalama himantopus.*
114. Knot. *Tringa canutus.*
115. Purple Sandpiper. *Arquatella maritima maritima.*
116. Pectoral Sandpiper. *Tringa maculata.*
117. White-rumped Sandpiper. *Pisobia fuscicollis.*
118. Least Sandpiper. *Pisobia minutilla.*
119. Red-backed Sandpiper. *Pelidna alpina sakhalina.*
120. Semipalmated Sandpiper. *Ereunetes pusillus.*
121. Western Sandpiper. *Ereunetes mauri.*
122. Sanderling. *Calidris leucophaea.*
123. Marbled Godwit. *Limosa fedoa.*
124. Hudsonian Godwit. *Limosa haemastica.*
125. Greenshank. *Glottis nebularius.*
126. Greater Yellowlegs. *Totanus melanoleucus.*
127. Yellow-legs. *Totanus flavipes.*
128. Solitary Sandpiper. *Helodromas solitarius solitarius.*
129. Willet. *Catoptrophorus semipalmatus semipalmatus.*
130. Western Willet. *Catoptrophorus semipalmatus inornatus.*
131. Bartramian Sandpiper. *Bartramia longicauda.*
132. Buff-breasted Sandpiper. *Tryngites subruficollis.*
133. Spotted Sandpiper. *Actitis macularia.*

134. Long-billed Curlew. *Numenius americanus.*
135. Hudsonian Curlew. *Numenius hudsonicus.*
136. Eskimo Curlew. *Numenius borealis.*
137. Black-bellied Plover. *Squatarola squatarola.*
138. Green Plover. *Charadrius dominicus.*
139. Killdeer Plover. *Oxyechus vociferus.*
140. Semipalmated Plover. *Acgialitis semipalmata.*
141. Piping Plover. *Aegialitis meloda.*
142. Wilson's Plover. *Ochthodromus wilsonius.*
143. Mountain Plover. *Podasocys montanus.*
144. Turnstone. *Arenaria interpres.*
145. American Oyster-catcher. *Haematopus palliatus.*
146. Quail. *Colinus virginianus virginianus.*
147. Florida Quail. *Colinus virginianus floridanus.*
148. Wild Turkey. *Meleagris gallopavo gallopavo.*
149. Florida Turkey. *Meleagris gallopavo osceola.*
150. White-crowned Pigeon. *Columba leucocephala.*
151. Mourning Dove. *Zenaidura macroura.*
152. Zenaida Dove. *Zenaina zenaida.*
153. White-winged Dove. *Melopelia asiatica.*
154. Ground Dove. *Chaemepelia passerina terrestris.*
155. Key West Dove. *Geotrygon chrysia.*
156. Mountain Dove. *Geotrygon montana.*
157. Blue-headed Guail-Dove. *Starnoenas cyanocephala.*
158. Turkey Vulture. *Cathartes aura.*
159. Black Vulture. *Catharista urubu.*
160. Swallow-tailed Kite. *Elanoides forficatus.*
161. White-tailed Kite. *Elanus leucurus.*
162. Mississippi Kite. *Ictinia mississippiensis.*
163. Everglade Kite. *Rostrhamus sociabilis.*
164. Marsh Hawk. *Circus hudsonius.*
165. Sharp-shinned Hawk. *Accipiter velox.*
166. Cooper's Hawk. *Accipiter cooperi.*
167. American Goshawk. *Astur atricapillus.*
168. Red-tailed Hawk. *Buteo borealis.*
169. Red-shouldered Hawk. *Buteo lineatus platypterus.*

170. Florida Red-shouldered Hawk. *Buteo lineatus alleni.*
171. Swainson's Hawk. *Buteo swainsoni.*
172. Broad-winged Hawk. *Buteo platypterus.*
173. Short-tailed Hawk. *Buteo brachyurus.*
174. Golden Eagle. *Aquila chrysaetos.*
175. Bald Eagle. *Haliaeetus leucocephalus.*
176. Duck Hawk. *Falco peregrinus anatum.*
177. Pigeon Hawk. *Falco sparverius.*
178. American Sparrow Hawk. *Falco sparverius.*
179. Cuban Sparrow Hawk. *Falco sparverioides.*
180. Audubon's Caracara. *Polyborus cheriway.*
181. American Osprey. *Pandion haliaeetus carolinensis.*
182. American Barn Owl. *Aluco pratincola.*
183. Florida Barred Owl. *Strix varia alleni.*
184. Florida Screech Owl. *Otus asio floridanus.*
185. Great Horned Owl. *Bubo virginianus.*
186. Florida Burrowing Owl. *Speotyto cunicularia floridana.*
187. Carolina Paroquet. *Conuropsis carolinensis.*
188. Ani. *Crotophaga ani.*
189. Mangrove Cuckoo. *Coccyzus minor.*
190. Maynard's Cuckoo. *Coccyzus minor maynardi.*
191. Yellow-billed Cuckoo. *Coccyzus americanus.*
192. Black-billed Cuckoo. *Coccyzus erythrophthalmus.*
193. Belted Kingfisher. *Ceryle alcyon.*
194. Ivory-billed Woodpecker. *Campephilus principalis.*
195. Couthern Hairy Woodpecker. *Dryobates villosus audubonii.*
196. Downy Woodpecker. *Dryobates pubescens.*
197. Red-cockaded Woodpecker. *Dryobates borealis.*
198. Yellow-bellied Woodpecker. *Sphyrapicus varius.*
199. Pileated Woodpecker. *Phloeotomus pileatus.*
200. Red-headed Woodpecker. *Melanerpes erythrocephalus.*
201. Red-bellied Woodpecker. *Centurus carolinus.*
202. Golden-winged Woodpecker. *Colaptes aurotus.*

203. Chuck-will's-widow. *Antrostomus carolinensis.*
204. Whip-poor-will. *Antrostomus vociferus.*
205. Nighthawk. *Chordeiles virginianus.*
206. Florida Nighthawk. *Chordeiles virginianus chapmani.*
207. Chimney Swift. *Chaetura pelagica.*
208. Ruby-throated Hummingbird. *Archilochus colubris.*
209. Scissor-tailed Flycatcher. *Milvulus forficatus.*
210. Kingbird. *Muscivora forficata.*
211. Gray Kingbird. *Tyrannus dominicensis.*
212. Crested Flycatcher. *Myiarchus crinitus.*
213. Phœbe Flycatcher. *Sayornis phoebe.*
214. Wood Pewee. *Myiochanes virens.*
215. Yellow-bellied Flycatcher. *Empidonax flaviventris.*
216. Arcadian Flycatcher. *Empidonax virescens.*
217. Least Flycatcher. *Empidonax minimus.*
218. Florida Blue Jay. *Cyanocitta cristata florincola.*
219. Florida Jay. *Aphelocoma cyanea.*
220. American Crow. *Corvus americanus floridanus.*
221. Florida Crow. *Corvus brachyrhynchos pascuus.*
222. Fish Crow. *Corvus ossifragus.*
223. Bobolink. *Dolichonyx oryzivorus.*
224. Cowbird. *Molothrus ater.*
225. Yellow-headed Blackbird. *Xanthocephalus xanthocephalus.*
226. Red-winged Blackbird. *Agelaius phoeniceus.*
227. Bahaman Red-winged Blackbird. *Agelaius phoenicius bryanti.*
228. Meadowlark. *Sturnella magna.*
229. Orchard Oriole. *Icterus spurius.*
230. Baltimore Oriole. *Icterus galbula.*
231. Florida Grackle. *Quiscalus quiscula aglaesus.*
232. Boat-tailed Grackle. *Quiscalus major.*
233. Purple Finch. *Carpodacus purpureus.*
234. English Sparrow. *Passer domesticus.*
235. American Goldfinch. *Astragalinus tristis.*

236. Pine Siskin. *Spinus pinus.*
237. Snowflake. *Plectrophenax nivalis.*
238. Vesper Sparrow. *Pooecetes gramineus.*
239. Savanna Sparrow. *Passerculus sandwichensis savanna.*
240. Grasshopper Sparrow. *Ammodramus savvanarum australis.*
241. Henslow's Sparrow. *Passerherbulus henslowi.*
242. Leconte's Sparrow. *Passerherbulus lecontei.*
243. Sharp-tailed Sparrow. *Passerherbulus caudacutus.*
244. Seaside Sparrow. *Passerherbulus martimus maritimus.*
245. Scott's Seaside Sparrow. *Passerherbulus martimus peninsuulae.*
246. Dusky Seaside Sparrow. *Passerherbulus nigrescens.*
247. Lark Sparrow. *Chondester grammacus.*
248. White-throated Sparrow. *Zonotrichia albicollis.*
249. Chipping Sparrow. *Spizella passerina.*
250. Field Sparrow. *Spizella pusila.*
251. Slate-colored Junco. *Junco hyemalis.*
252. Pine-wood Sparrow. *Peucaea aestivalis aestivalis.*
253. Bachman's Sparrow. *Peucaea aestivalis bachmanii.*
254. Song Sparrow. *Melospiza melodia.*
255. Swamp Sparrow. *Melospiza georgiana.*
256. Fox Sparrow. *Passerella iliaca.*
257. Towhee. *Pipilo erythrophthalmus erythrophthalmus.*
258. White-eyed Towhee. *Pipilo erythrophthalmus alleni.*
259. Cardinal. *Cardinalis cardinalis.*
260. Rose-breasted Grosbeak. *Zamelodia ludoviciana.*
261. Blue Grosbeak. *Guiraca caerulea.*
262. Indigo Bunting. *Passerina cyanea.*
263. Painted Bunting. *Passerina ciris.*
264. Grassquit. *Tiaris bicolor.*
265. Melodius Grassquit. *Tiaris canora.*

266. Scarlet Tanager. *Piranga erythromelas.*
267. Summer Tanager. *Piranga rubra.*
268. Purple Martin. *Progne subis.*
269. Cuban Martin. *Progne cryptoleuca.*
270. Cuban Cliff Swallow. *Petrochelidon fulva.*
271. Bahaman Swallow. *Callichelidon cyaneoviridis.*
272. Tree Swallow. *Tachycienata bicolor.*
273. Bank Swallow. *Riparia riparia.*
274. Rough-winged Swallow. *Stelgidopteryx serripennis.*
275. Cedar Waxwing. *Bombycilla cedrorum.*
276. Loggerhead Shrike. *Lanius ludovicianus.*
277. Black-whiskered Vireo. *Vireo calidris barbatulus.*
278. Red-eyed Vireo. *Vireosylva olivacea.*
279. Philadelphia Vireo. *Vireosylva philadelphica.*
280. Warbling Vireo. *Vireosylva gilva.*
281. Yellow-throated Vireo. *Lanivireo flavifrons.*
282. Blue-headed Vireo. *Lanivireo solitarius solitarius.*
283. Mountain Solitary Vireo. *Lanivireo solitarius alticola.*
284. White-eyed Vireo. *Vireo griseus griseus.*
285. Key West Vireo. *Vireo griseus maynardi.*
286. Bahama Honey Creeper. *Coereba bahamensis.*
287. Black-and-White Warbler. *Mniotilta varia.*
288. Prothonotary Warbler. *Protonotaria citrea.*
289. Swainson's Warbler. *Helinaia swainsoni.*
290. Worm-eating Warbler. *Helmitherus vermivorus.*
291. Bachman's Warbler. *Vermivora bachmani.*
292. Blue-winger Warbler. *Vermivora pinus.*
293. Golden-winged Warbler. *Vermivora chrysopetera.*
294. Nashville Warbler. *Vermivora ruficapilla.*
295. Orange-crowned Warbler. *Vermivora celata.*
296. Tennessee Warbler. *Vermivora peregrina.*
297. Parula Warbler. *Compsothlypis americana.*
298. Cape May Warbler. *Dendroica tigrina.*
299. Yellow Warbler. *Dendroica aestiva.*
300. Black-throated Blue Warbler. *Dendroica caerulescens.*

301. Yellow-rumped Warbler. *Dendroica coronata.*
302. Magnolia Warbler. *Dendroica magnolia.*
303. Cerulean Warbler. *Dendroica caerulea.*
304. Chestnut-sided Warbler. *Dendroica pennsylvanica.*
305. Bay-breasted Warbler. *Dendroica castanea.*
306. Black-poll Warbler. *Dendroica striata.*
307. Blackburnian Warbler. *Dendroica fusca.*
308. Yellow-throated Warbler. *Dendroica dominica.*
309. Black-throated Green Warbler. *Dendroica virens.*
310. Kirtland's Warbler. *Dendroica kirtlandi.*
311. Pine Warbler. *Dendroica vigorsi.*
312. Palm Warbler. *Dendroica palmarum palmarum.*
313. Yellow Palm Warbler. *Dendroica palmarum hypochrysea.*
314. Prairie Warbler. *Dendroica discolor.*
315. Oven-bird. *Seiurus aurocapillus.*
316. Water-Thrush. *Seiurus noveboracensis.*
317. Louisiana Water-Thrush. *Seiurus motacilla.*
318. Kentucky Warbler. *Oporornis formosus.*
319. Connecticut Warbler. *Oporornis agilis.*
320. Maryland Yellowthroat. *Geothlypic trichas trichas.*
321. Florida Yellowthroat. *Geothlypic trichas ignota.*
322. Hooded Warbler. *Wilsonia mitrata.*
323. American Redstart. *Setophaga ruticilla.*
324. Titlark. *Anthus rubescens.*
325. Mockingbird. *Minus polyglottos.*
326. Catbird. *Dumatella carolinensis.*
327. Brown Thrasher. *Toxostoma rufum.*
328. Carolina Wren. *Thryothorus ludovicianus ludovicianus.*
329. Florida Wren. *Thryothorus ludovicianus miamensis.*
330. Bewick's Wren. *Thryomanes bewicki.*
331. House Wren. *Troglodytes aedon.*
332. Winter Wren. *Nannus hiemalis.*
333. Short-billed Marsh Wren. *Cistothorus stellaris.*
334. Long-billed Wren. *Telmatodytes palustris.*

335. Marian's Marsh Wren. *Telmatodytes palustris marianae.*
336. Brown Creeper. *Certhia familiaris americana.*
337. Florida White-Breasted Nuthatch. *Sitta carolinensis atkinsi.*
338. Brown-headed Nuthatch. *Sitta pusilla.*
339. Tufted Titmouse. *Baelophus bicolor.*
340. Carolina Chickadee. *Penthestes carolinensis.*
341. Golden-crowned Kinglet. *Regulus satrapa.*
342. Ruby-crowned Kinglet. *Regulus calendula.*
343. Blue-gray Gnatcatcher. *Polioptila caerulea.*
344. Wood Thrush. *Hylocichlt fuscelina.*
345. Wilson's Thrush. *Hylocichla mustelina.*
346. Gray-cheeked Thrush. *Hylocichla aliciae.*
347. Olive-backed Thrush. *Hylocichla ustulata swainsoni.*
348. Hermit Thrush. *Hylocichla guttata palasi.*
349. American Robin. *Planesticus migratorius.*
350. Bluebird. *Sialia sialis.*

BUZZARDS IN RELATION TO DISEASES OF STOCK.

There has been much agitation in recent years against the buzzard as a distributor of hog cholera and other stock diseases, but those who hope to prevent these epizootics by exterminating the buzzard should not lose sight of the fact that this bird is only one of many agents concerned in the spread of stock diseases.

Hog cholera and similar diseases are carried in various ways, the chief long distance distribution being caused by shipment of diseased animals, local distribution by mechanical transportation of the germs on the feet or other parts of the body of various animals, and in the feces of scavengers which have fed on the carcasses of diseased stock.

So far as distribution of the germs of stock disease in feces is concerned, the buzzard has a better record than any other carrion feeder. This has been scientifically demonstrated by Drs. S. T. Darling and L. B. Bates, in Panama, and Dr. Harry Morris, in Louisiana. (See Amer. Vet. Rev. 42, No. 1, October, 1912, pp. 70-75, and Bulletin 136, Louisiana Agricultural Experiment Station, November, 1912.) The investigations reported in these publications conclusively prove that spores of anthrax are destroyed in the digestive tract of the buzzard, but that they pass uninjured through the bodies of dogs, hogs, cats, o'possums, chickens and flies. In most of these animals virulent spores are present in the alimentary tract and in the feces from two to six days after carrion has been eaten. Thus a dog, which has fed on an animal killed by anthrax, may disseminate spores of the disease anywhere that it goes for as many as six days thereafter. The damage that may result from the spread of disease by the multitude of prowling dogs, cats and other animals so numerous on farms, is simply incalculable. The buzzard, on the contrary, must be completely exonerated from blame for this type of disease spreading.

Buzzards undoubtedly sometimes carry the germs of stock diseases on their feet, but so also do dogs, cats, chickens, pigeons, horses, cows and other domestic animals. The diseases are distributed also by man, and last, but by no means least, by flies.

Since man and all domestic animals are known to distribute stock diseases, it is unjust to attempt to place the chief responsibility upon a wild bird which is never closely associated with diseased stock.

The comparative unimportance of the buzzard as a carrier of stock diseases is further proved by the fact that severe epizootics of hog cholera occur where this useful scavenger is very rare, as in Wisconsin and Eastern Washington, and even where it is practically entire absent, as in Ontario, Quebec, and other Canadian Provinces.

Summarizing: Hog cholera, anthrax and other contagious stock diseases prevail in regions where there are no buzzards. This is positive proof that extermination of the buzzard will not eradicate these diseases.

In regions where the buzzard occurs it is only a minor agent in disease distribution. It is the only carrion feeder known that does not distribute anthrax bacilli in its feces. So far as distribution on the feet, etc., is concerned, other animals, as dogs, o'possums and swine, are just as apt to contaminate water as the buzzard, and dogs and chickens are far more likely to carry infection by bodily contact with other domestic animals. Before farmers take steps to exterminate the buzzard they should remember that they are harboring several domestic animals that have far greater possibilities as disease carriers. The fact that the diseases may be distributed by flies is quite enough to explain the most severe epizootics.

However, the chief blame lies with man himself. The neglect to properly dispose of carcasses is the factor most responsible for continuance and spread of stock diseases. It is inexcusable to wage warfare upon a bird which cannot harm us unless we give it the opportunity by our own criminal negligence. Let farmers promptly bury or burn all animals dying on their premises and thereby remove the primary cause of the spread of stock diseases.

THE BUZZARD DEFENDED.

[From The Florida Times-Union, March 9, 1915.]

The United States Department of Agriculture comes to the defense of the buzzard. Some of the facts given in the memorandum of the Biological Survey, printed on our agricultural page today, are strong evidence that the ugly, but useful, bird is not guilty of disseminating animal dis-

eases. If the germ of anthrax cannot pass through the digestive organs of this carrion eater without being destroyed it is not likely that it could disseminate hog cholera or any other animal disease. In the strong digestion of that bird it seems nothing having life could survive. It would seem that nature, in equipping the buzzard for its work of clearing the face of the earth of animal matter that might cause disease, had made that equipment thorough.

It is never safe to destroy the balance of nature. Millions of small birds are destroyed annually by sportsmen, and the consequence is that their natural prey, the insect tribes, are increasing at a rate which necessitates constantly increasing vigilance on the part of the gardener and the farmer. If all the birds were destroyed every green thing on the face of the earth would probably be eaten up in the course of a very few years. Frederick the Great ordered every small bird in his kingdom destroyed, it is said, in a pet because some sparrows had eaten a few of his cherries, with the result that two years or so afterward there were no cherries to speak of in his dominions, but an overwhelming outbreak of insects instead.

Insects multiply at an astonishing rate and have enormous appetites. The birds do not multiply so rapidly, but can destroy many hundreds of insects each per day, especially when feeding their nestlings. Rats breed very fast and destroy many millions of dollars worth of property annually in the United States as well as in other countries. Every hawk or owl killed is a longer lease of life and the privilege of procreation to scores of rats. The hunter is the enemy of the farmer, who sometimes ignorantly joins the ranks of the bird slayers for a day or so.

The buzzard does not prey upon insects or live rats, but make the earth more habitable to other creatures. There are other facts known to keen observers besides those mentioned in the paper referred to above, which serve to

show that the buzzard is guiltless of spreading disease among animals by feeding on the carcasses of the victims of germ maladies. Until men learn to burn or bury all such carcasses there will be need for the buzzard, and even then his usefulness will not have altogether departed. It is possible that his extermination will result in increase in the number of cases of anthrax and the like diseases.

The question of the extermination of this useful bird will come before the next Legislature, and it will be supported by those who feel that it is their mission to correct the mistakes of nature. It has been before that body at least once in the past. Convincing argument that he was and is not guilty of the indictment brought against him was offered then and resulted in the defeat of the measure. We hope that the same fate may meet this second attempt.

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